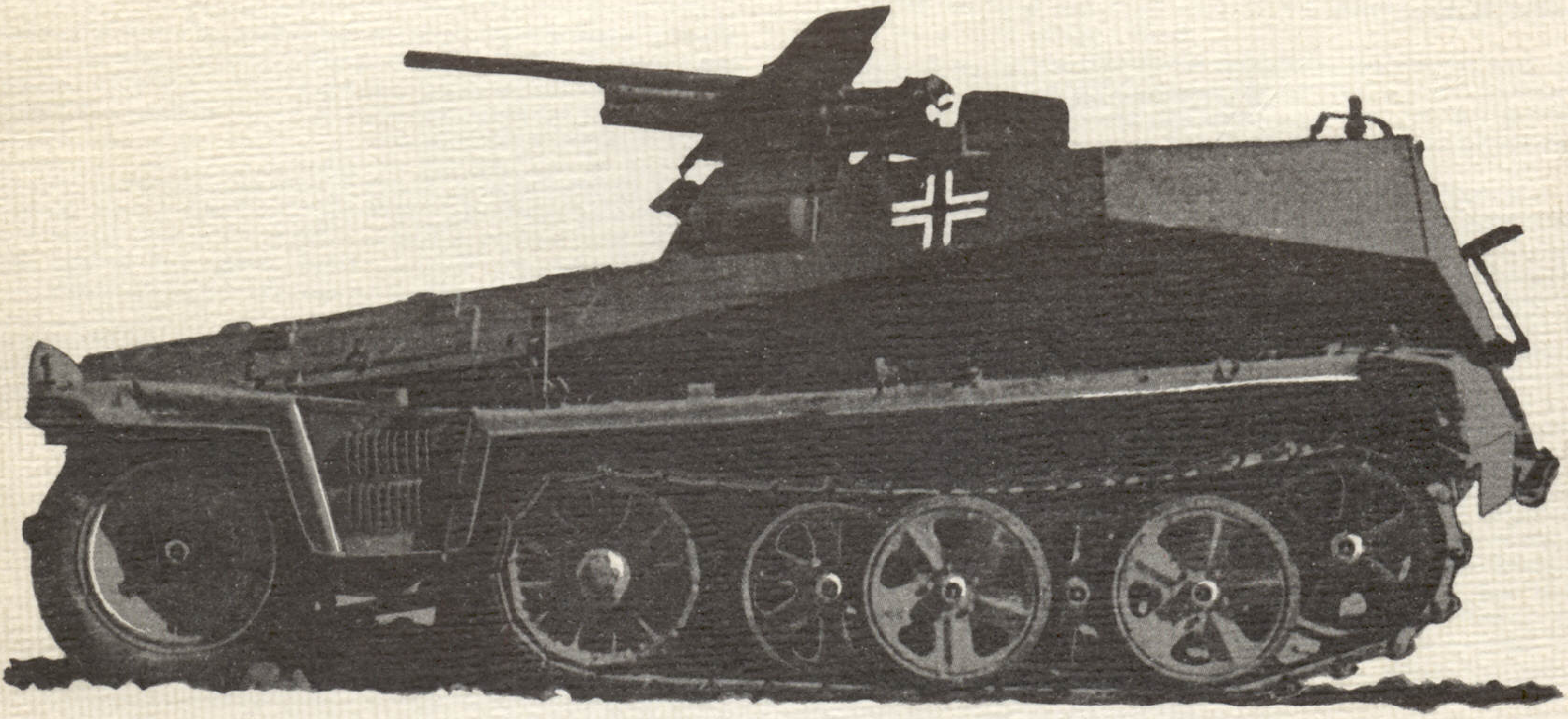
German Army Semi-Tracked Vehicles

BELLONA

Part 2 '39-'45 Handbook No. 2



LIGHT ARMOURED PERSONNEL CARRIERS

Compiled by P. Chamberlain and H. L. Doyle

50p

Introduction

Even before the first three Panzer Divisions were formed in October 1935, the German Officers who were at the hub of the Panzer Division Theory set down requirements for highly mobile vehicles to transport riflemen, combat engineers and medical services alongside the all important tanks.

During 1926 trials were held by the German Ordnance Department with a view to deciding upon the most satisfactory type of vehicle to act as an Artillery tractor. The requirements were complex – the vehicle was to have a good cross country performance, therefore suggesting a track laying vehicle, but at the same time any future European conflict would see the Army travelling much of the time over good roads, hence the proposed tractor needed also to have high speed and good handling on the road. The companies of Daimler and Benz had experimented with half track vehicles during the First World War and had produced vehicles to this configuration. The advantages of the half-track were mainly that by having the front wheels, it did not need the highly complex, and at that time unsuitable steering devices needed to give tracked vehicles manoeuverability on road surfaces. High speed was gained by careful design of rubber capped track shoes with needle roller bearings. Thus these vehicles had the speed of a wheeled vehicle but the cross country performance of a fully tracked vehicle. The disadvantage, which manifested itself more plainly during the War, was the complex nature of the design.

Since these semi-tracked vehicles had already been adapted for the task of Artillery Tractors and had the characteristics required, it is not surprising that the final specification for armoured carriers were for vehicles based on these semi-tracked types.

The 1 ton and 3 ton series of Zugkraftwagen provided the basis for a light and medium carrier respectively. Work was undertaken by Hanomag to design the 3 ton carrier as soon as they were entrusted with the development of the 3 ton series of semi-tracked vehicles in 1937. The first "Mittlerer gepanzerter Mannschaftstransportwagen" appeared later that year. This vehicle the SdKfz 251 is described in full in Part III of this Handbook.

The 1 ton vehicle did not materialize until 1939, and at no time during the War was it available in reasonable numbers. To augment supplies of this type of vehicle, like so many other equipments, the Germans were forced during latter stages of the War, to introduce substitute vehicles based upon chassis of foreign manufacture. In the field of semi-tracks the source was exclusively from French stocks and description of these interesting units takes up an important section of this Handbook. Of course, half track vehicles of the American M2 and M3 types were used whenever captured in serviceable condition, however, they were never captured in sufficient quantity to make material contribution to this historical record.

This booklet had been set out according to the classification of each major type. Under the general heading for each section is the brief technical and tactical history of that class. This is followed by the step by step illustration of every major variation on the basic type giving the year of introduction and cancellation. The Sd Kfz Number in most cases by the manufacturers numbering, the crew, the approximate vehicle weight and a passage on any important points of the particular model.

The Imperial War Museum Photograph number is given beside the Photograph reference if the picture is available from the Photographic Library. However, the bulk of photographs are from captured German manuals, handbooks and propoganda magazines such as 'Motor Schau' and 'Signal'.

For further information on the German method of vehicle designation we refer you to the introduction to Bellona Handbook No. 1, part I and II.

Many of the vehicles shown in this series of HANDBOOKS have already been or will be in the future, dealt with, in considerable detail in the BELLONA MILITARY VEHICLE PRINTS Series. Each issue in this series deals with up to four specific vehicles, not only German, but from every AFV producing country in the World. Each vehicle is dealt with in the most highly detailed way. Drawings generally showing five views including a sectional one, are the most accurate and detailed available. In addition there is a full page historical and technical data on each type plus photographic illustrations. Because many additional photographs are given in this series of Booklets, they serve as an ideal supplement to the Military Vehicle Prints.

This series of HANDBOOKS could not have been compiled without the kind help of the staff of the photographic Library, of the Imperial War Museum. To express our gratitude, we have shown all of the numbers of Imperial War Museum Photographs, so as to facilitate our Readers who wish to re-order large copies of these photographs for their collections. In addition from these photographs we have printed, one can see the scope of the collection available to the Public. It must be remembered that this is the biggest collection in the World. Full details of the various sizes of Photographs supplied and of the slides available, can be had from the Orders Department of the Imperial War Museum, Lambeth Road, London, S.E.1.

Further thanks must go to the Curator of the R.A.C. Tank Museum for his help in developing the Photographic Collection available to the Public. The Tank Museum also gave a large collection which is available. Details can be had from the Curator, R.A.C. Tank Museum, Bovington Camp, Wareham, Dorset, England.

Finally, sincere thanks are due to all those who through contribution or advice have assisted the Authors and thus helped to make this work available to all students of Military Vehicles and Armour. In particular, Walter J. Spielberger, M.S.A.E., Armin Sohns, Axel Duckert, Jnr., Col. R. J. Icks, C. Gurtner, R. Hunnicutt, D. Nash and G. Pavey.

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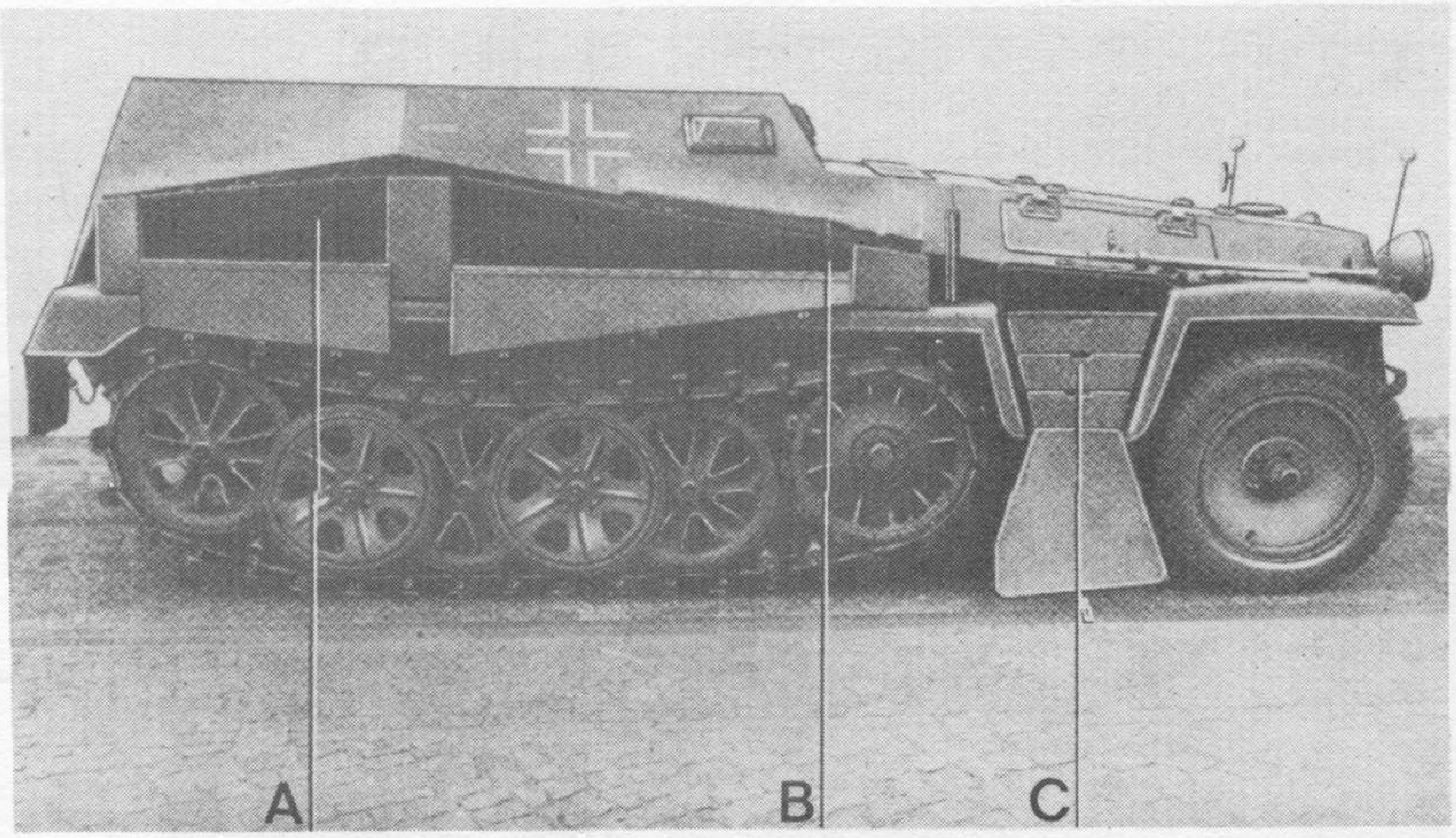


1

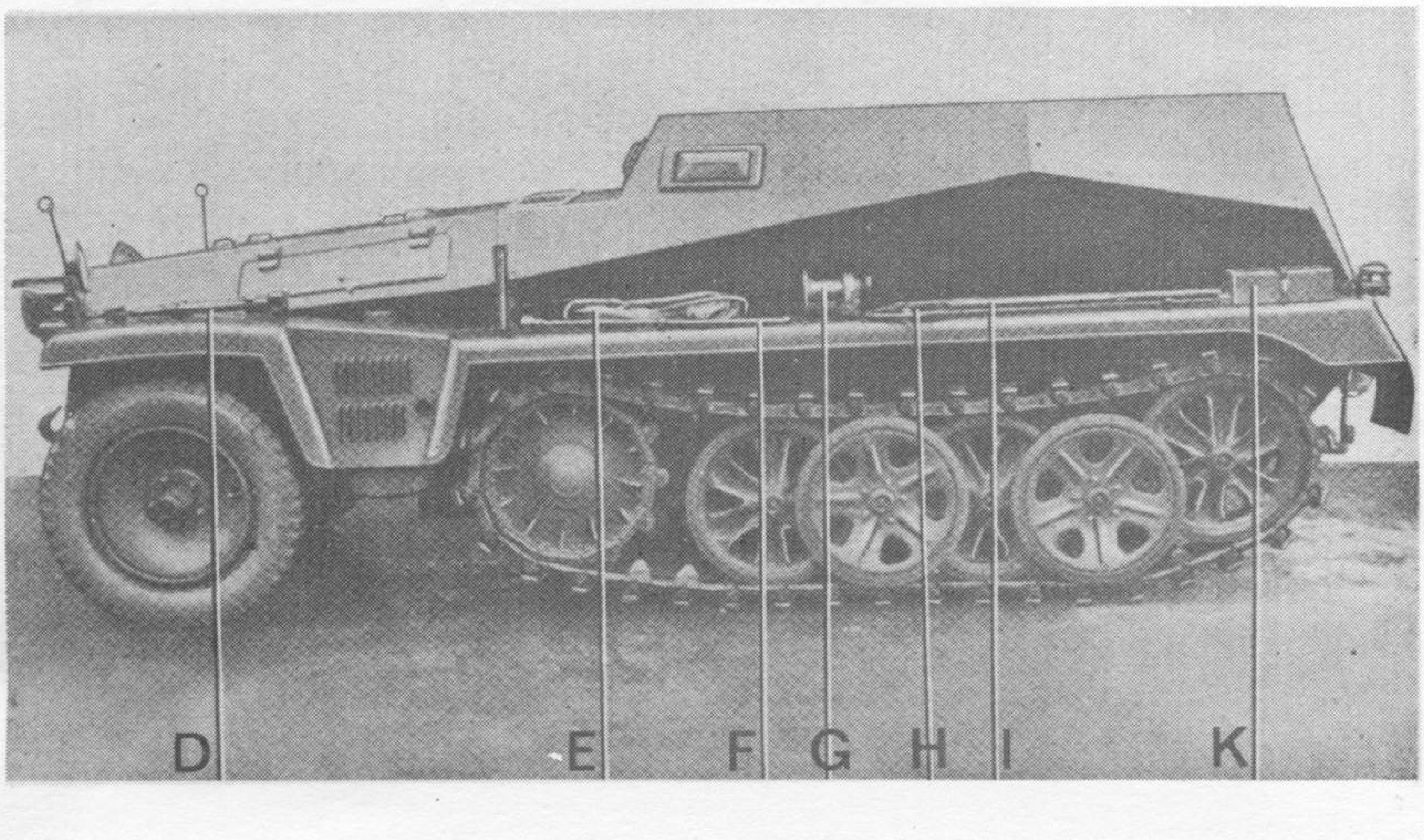
In order to provide vehicles for use by the Units which were to co-operate with or support armoured vehicles in combat, the German Ordnance Department issued requirements for vehicles with light armoured protection, which would possess good cross country performance, in addition to a high road speed. The semi-tracked artillery tractors had been designed with such mobility in mind so it was obvious that some of the lighter Zugkraftwagen be selected as the basis for further investigation, namely the Demag 1 ton and the Hanomag 3-ton tractors. Due to the limited carrying capacity of the Demag vehicle it was found necessary to shorten the chassis and carry a somewhat smaller body than that on the artillery tractor. This reduction in length was achieved by removing the last axle from the trackwork. Buessing-NAG developed the armoured body and proposed 14.5mm thickness for the frontal plates with side plates of 8mm thickness.

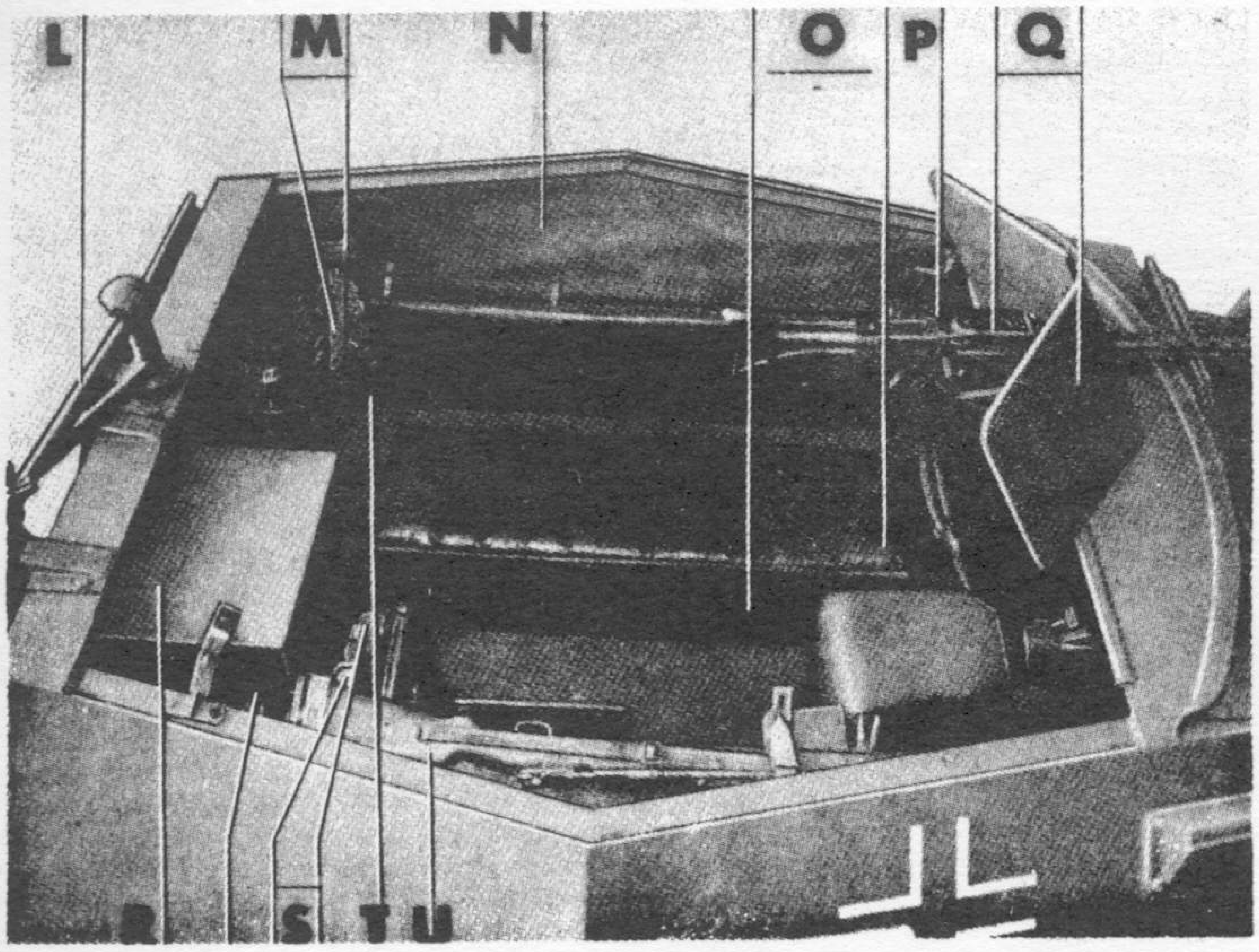
Successful in trials during 1939, it was named the "leichter Mannschaftstransportwagen", but was soon redesignated the "leichter Schuetzenpanzerwagen". It saw action for the first time during the French campaign in 1940 and subsequently served in large numbers on all fronts – both in basic form and as one of thirteen other variants which existed. Until 1943 it remained virtually unchanged, but in that year the armoured body was considerably redesigned so as to simplify and cut the cost of production. Thus it remained in production until the factories were over-run.

Demag devoted most of their production of the 1-ton chassis for use as the Armoured Sk Ktz 250, but in addition to their plant at Wetter Ruhr, the Mechanische Werke of Cottbus also produced this chassis. Assembly was completed by Evens & Pistor of Helsa in Thuringia with bodies also by DEW, Hannover and Steinmveller of Goemmersbach. During the later war years most of the armour was supplied by Bismarckhuette of Upper Silesia.

1939/45. Sd.Kfz.250/1.
Leichter Mannschaftstransportwagen (MTW)
Leichter Schuetzenpanzerwagen (SPW)
Demag D 7p.
Crew: 6.
Weight: 5.38 tonnes.
Length: 15ft 0in (456cm).
Width: 6ft 4½in (194.5cm)
Radius of Action: 186/109 Miles (300/175Km).
Height: 6ft 6in (198cm).
Ground Clearance: 11½in (28.5cm).
Fuel Capacity: 31 gals. (140 litres).
Speed: 37 mph (60 Kpmh)
Engine: Maybach HL 42 TRKM, 4.17 litres 6-cylinder water-cooled petrol developing 100 bhp at 2800 rpm.
Gearbox: Maybach Variorex VG 120128 H with 7 forward and 3 reverse speeds.
Suspension: Wheels–transverse leaf, tracks–torsion bar.

2





3

All of the different variants of the Sd Kfz 250 vehicle carried a certain amount of equipment which was standard. Photographs 1 and 2 on page 1 indicate this standard equipment.

A and B	Accessory boxes – contents included an axe and a fire extinguisher.
C	Tool boxes.
D	Pickaxe and Hatchet.
E	Wire cutter and Tow rope.
F	Starting handle
G	Jack.
H	Spade.
I.	Crowbar.
K.	Wooden shoe for Jack.

(Photo 1: MH 10103. Photo 2: MH 10089).

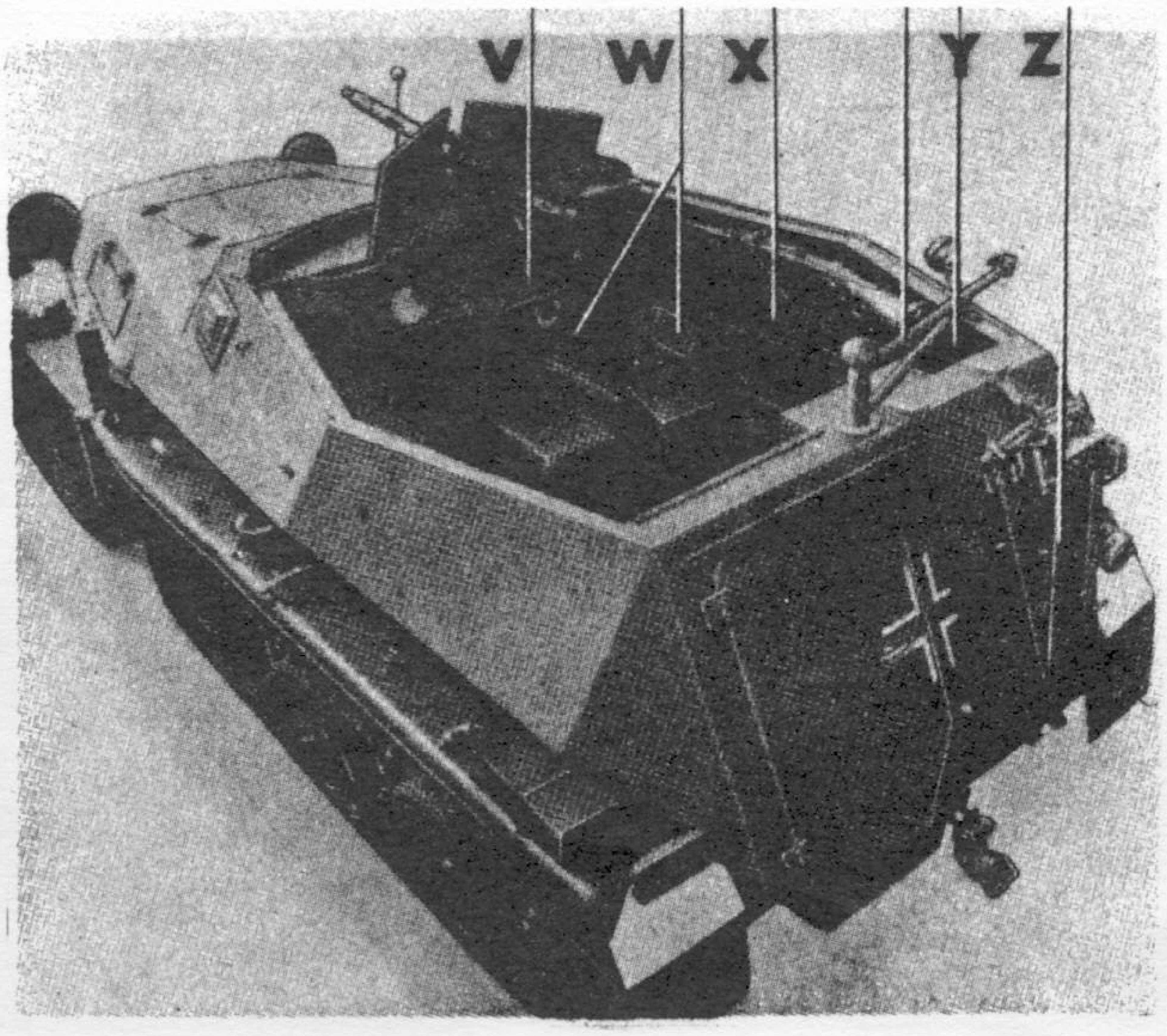
L	AA defence pivot for MG 34.
M	Belt drum container and spent ammunition sack for MG 34.
N	Side wall baggage container – contents included gunsight, spare barrels and tools for MG 34, Binoculars, periscopes and other vision equipment, and crew clothing bags.
O	Container beneath bench seat – contents included 16 x MG 34 ammunition boxes and tarpaulin for covering roof opening.

Position of storage specifically found on the SdKfz 250/1 standard troop carrier.

P	Gasmasks
Q	1 x 7.92 MG 34 (fixed) behind pivoting armoured shield.
R	Two petrol and oil containers, 3 belt drum containers and spent ammunition sack, and supplementary ammunition boxes.
S	MG 34 barrel protectors and containers.
T	Set of hoops over which roof tarpaulin is fitted.
U	4 x 7.92 mm Kar 98K rifles.
V	Wireless set.
W	1 x 9 mm MP 38 with six ammunition magazines.
X	1 x 7.92 mm MG 34 in storage.
Y	Verey pistol and 12 rounds of signal ammunition.
Z	Heavy field mounting for MG 34.

(Photo 3 MH 10091. Photo 4 MH 10092).

4



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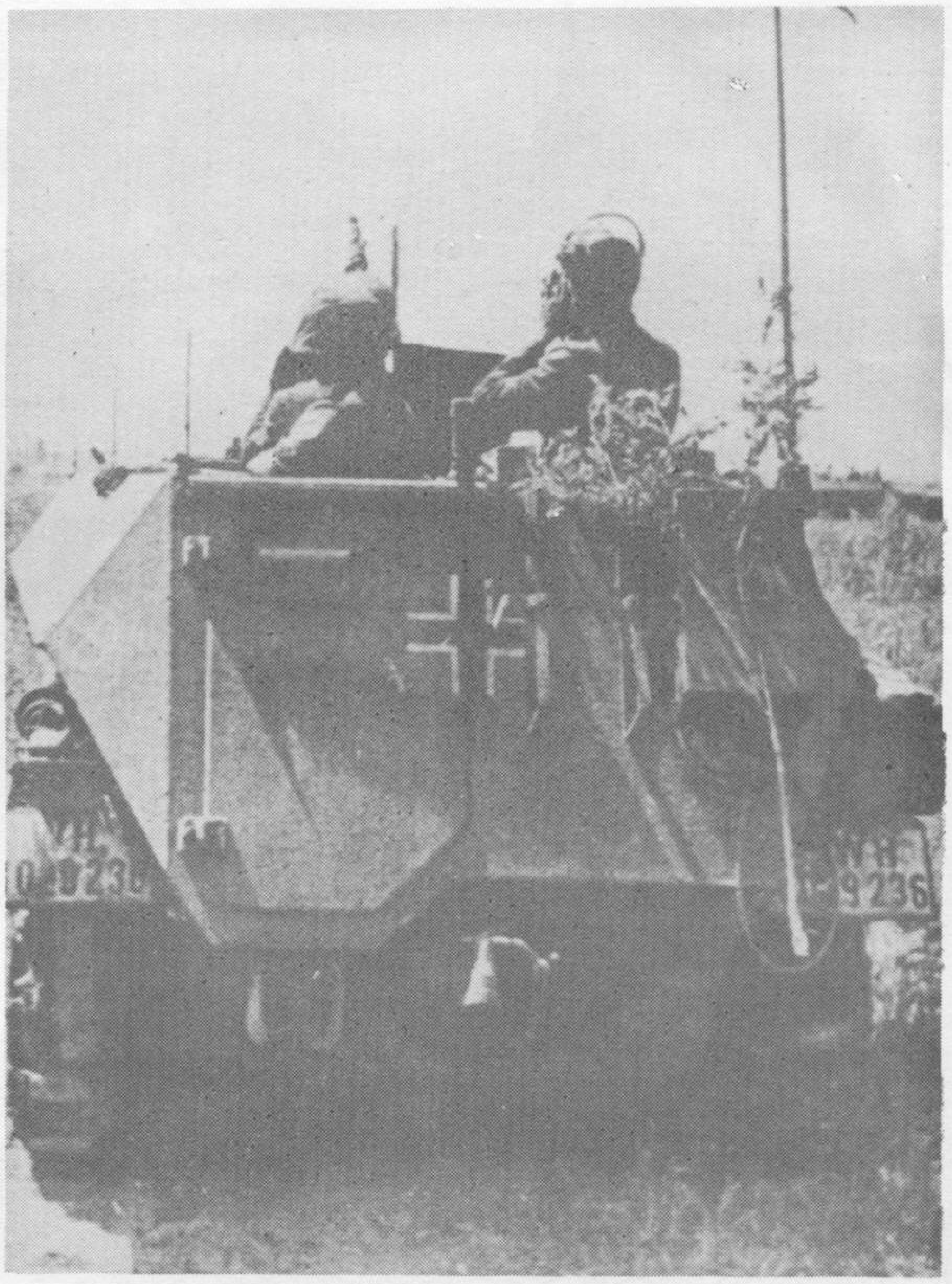
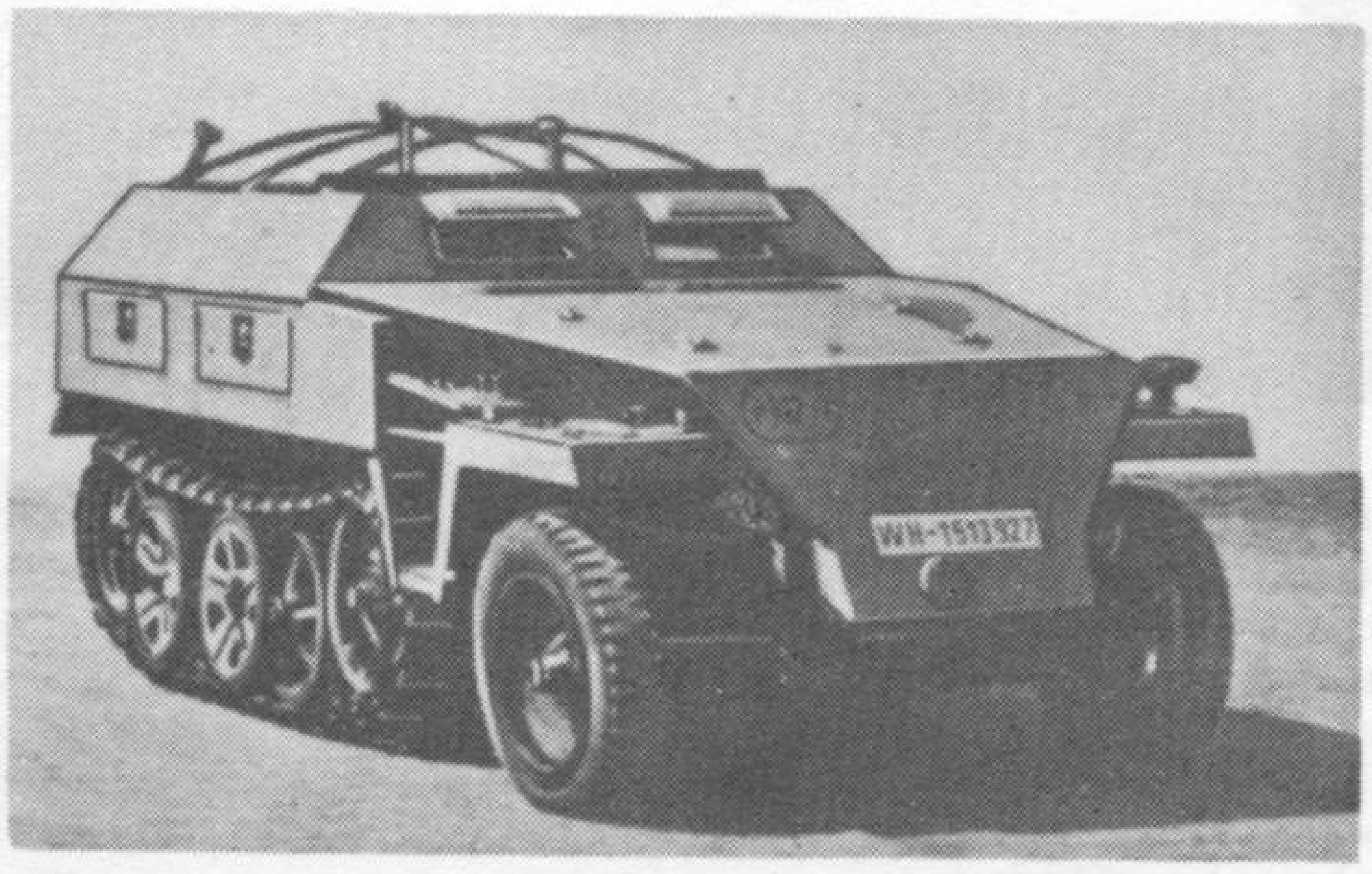


1939/43. Sd Kfz.250/1.
Leichter Schutzenpanzerwagen.
Crew: 6.
Weight: 5.38 tonnes.
Armament: 2 x 7.92mm MG 34 – one in pivot mounting, one with alternative heavy field mounting or AA defence of vehicle. Crew weapons additional.

Platoon Commanders vehicles normally carried only one mounted MG 34. Wireless equipment varied depending upon the Platoon's scale of equipment. However, as always the FU Spr. Ger.F. was fitted. (Photo 5).

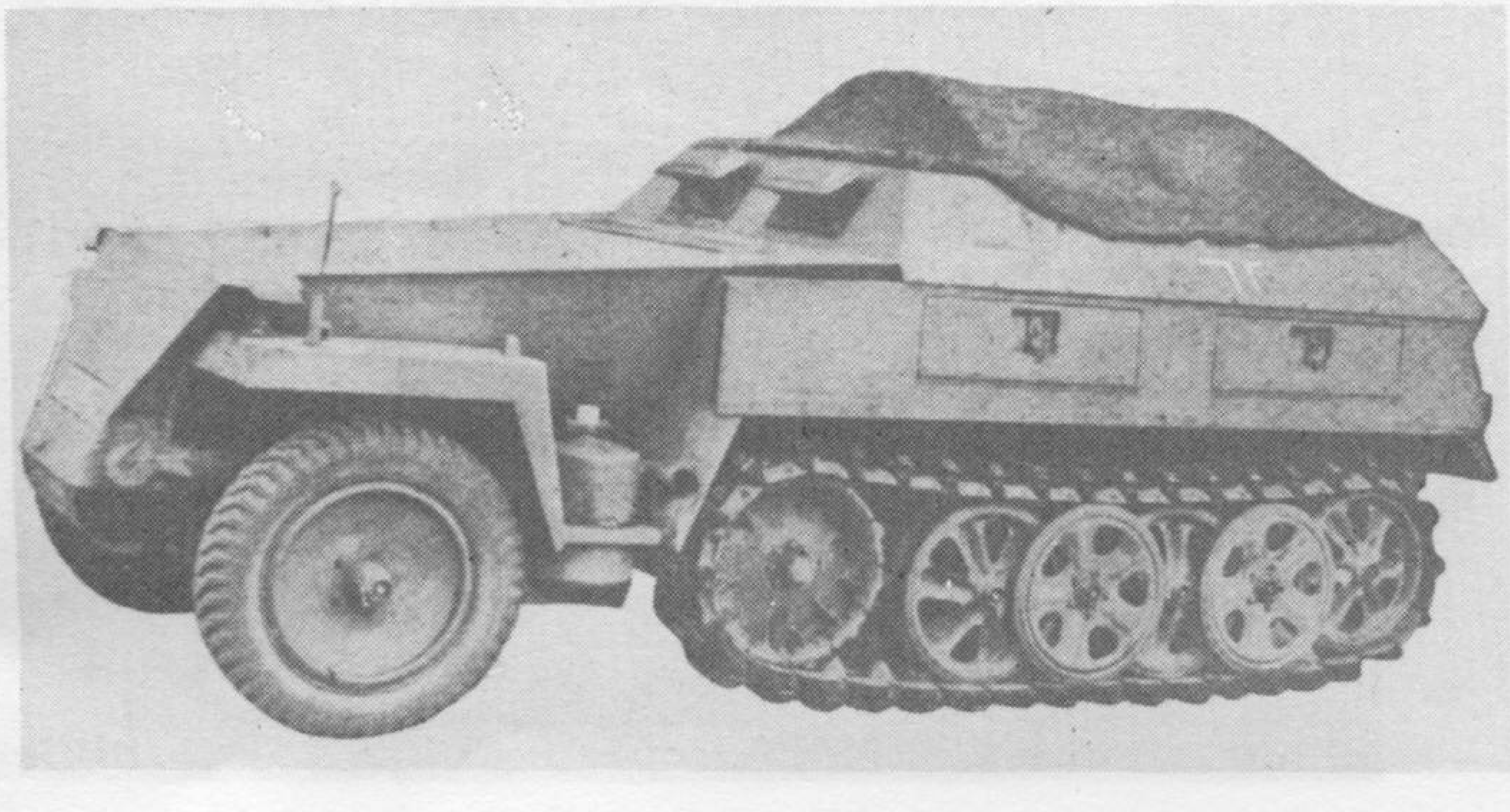
6

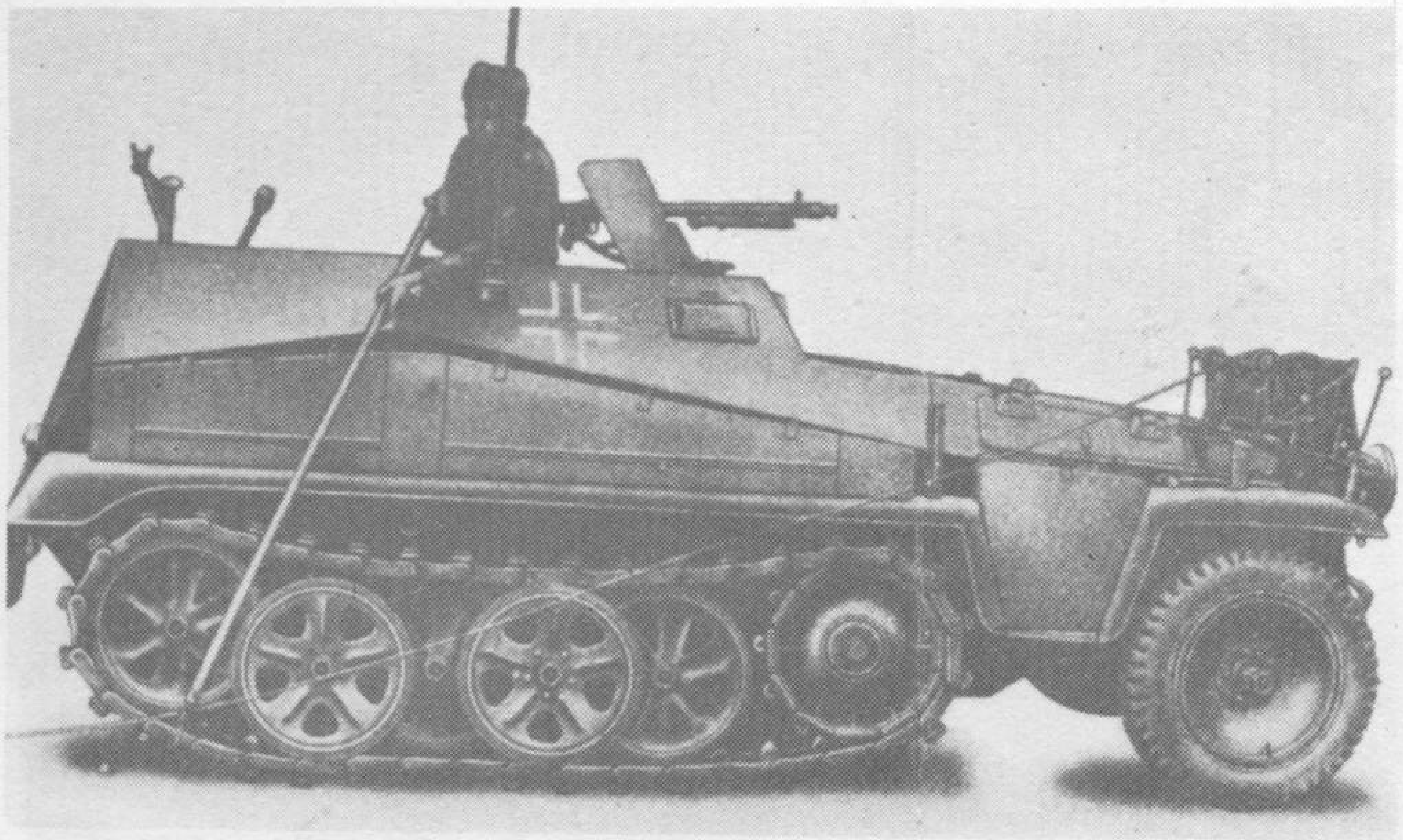


From our two photographs it is not possible to decide which versions of the series are represented as there are no external differences between many versions – however since no armament is visible they are probably acting as armoured supply vehicles.
(Photo 6: MH 8949. Photo 7: HU 4222).

1943/45. Sd Kfz 250.
During 1943 the bodywork of these vehicles was redesigned to simplify production – the number of separate plates now used was reduced by nearly 50%. Ballistic protection was not impared by these changes and storage capacity was much improved. The full size head-lights were deleted on this model. The vision visors on the superstructure sides were replaced by slits which proved adequate under most conditions. Larger access doors were provided in the rear plate – thus use of the roof opening as an exit was reduced, hence, very many of this type were seen with the roof hoops for the tarpaulin fitted at all times.

7





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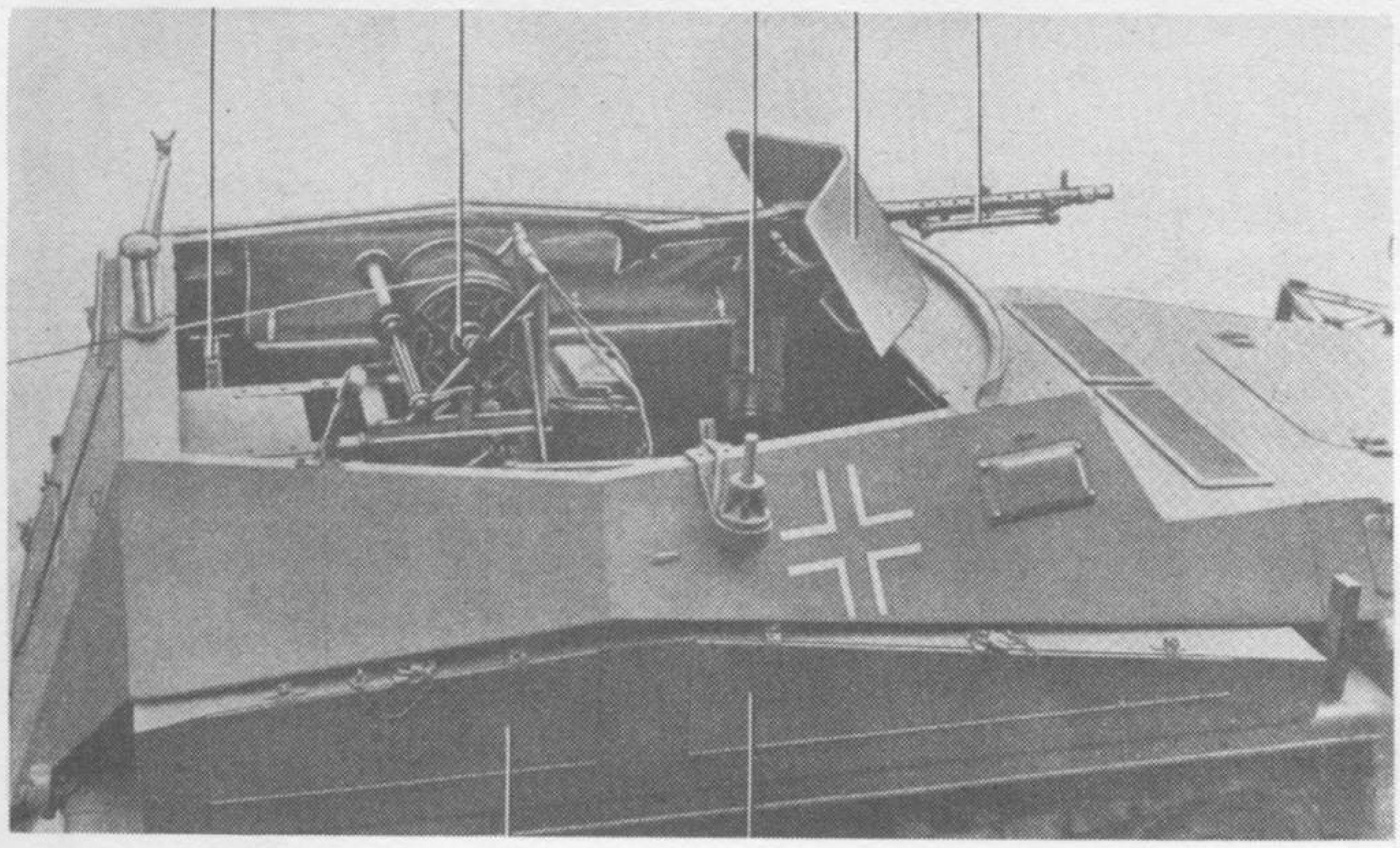


9

Photo 8 shows a vehicle paying out the telephone cable from the racks on the mudguards. One vehicle could lay up to three cables at the same time – one from each of the mudguards and one from the rear. However, the normal purpose for the side laying was where the cable was being laid alongside a roadway. As can be seen one of the crew directs the cable to where required.

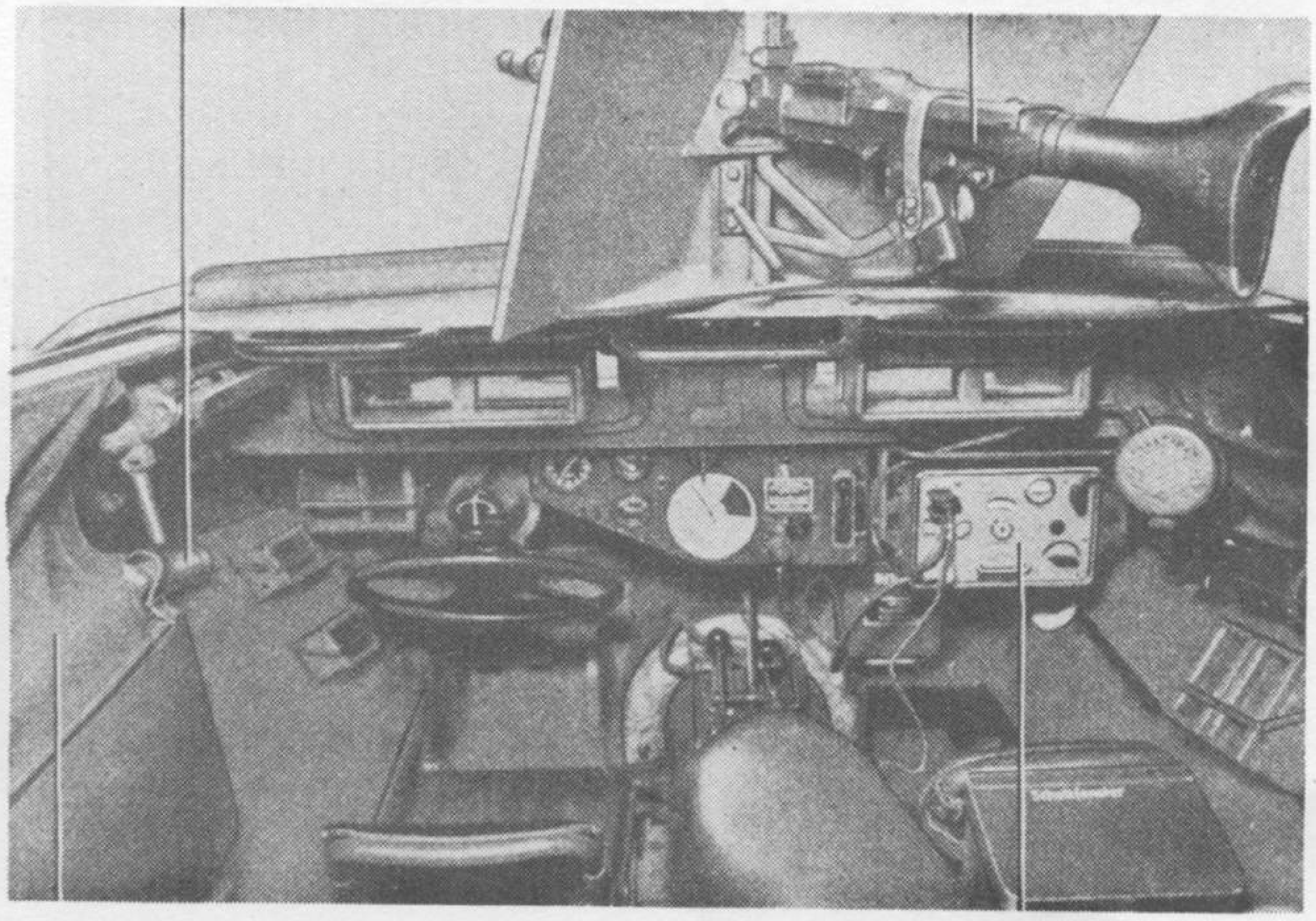
Photo 9 MH 10096 cable being paid out via the mounting rack at the rear of the cable drum, on the edge of the fighting compartment is a bracket and clip in which the AA MG.34 is clipped when the vehicle is on the move.

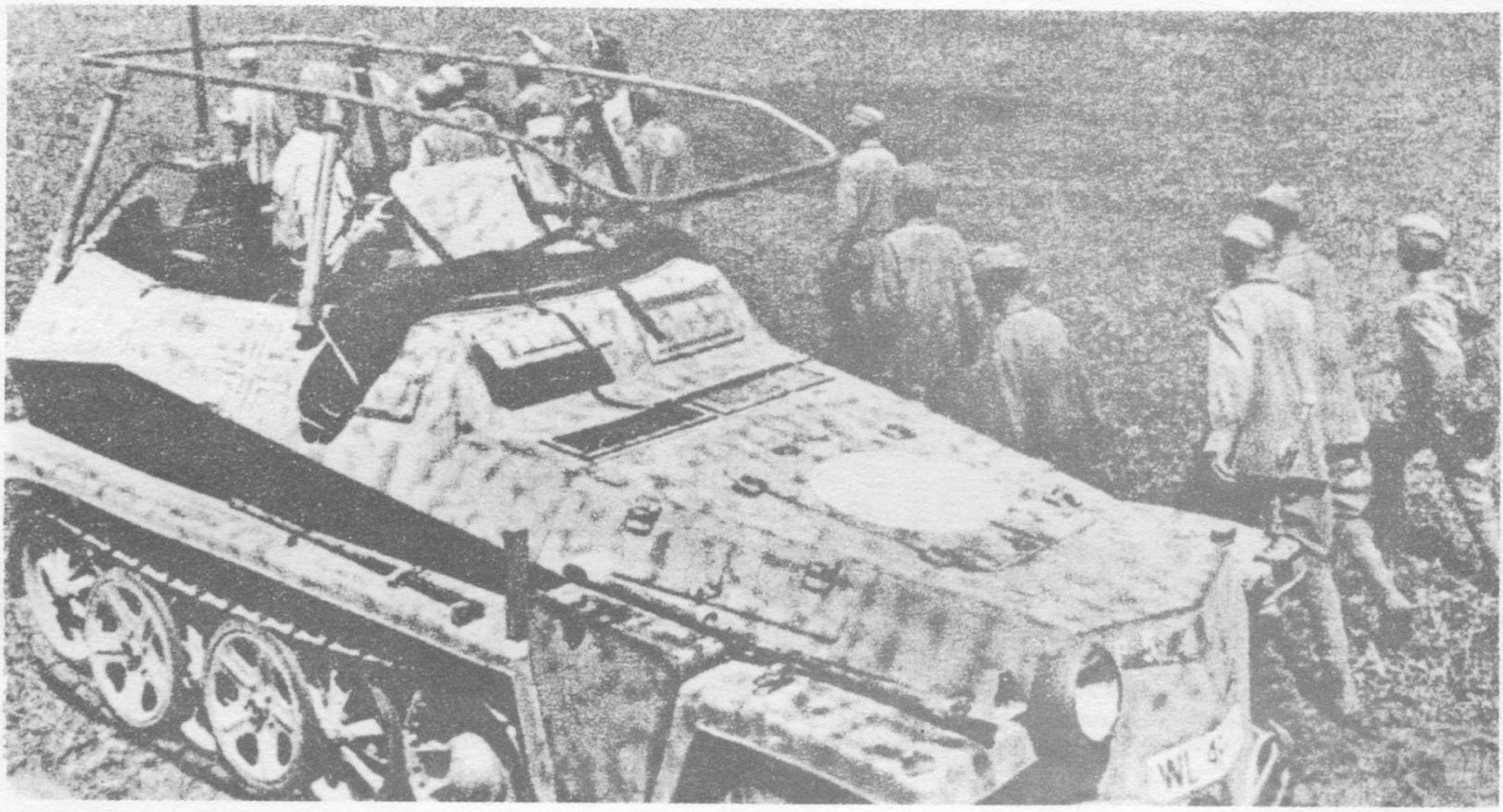
SD Kfz 250/2
Leichter Fernsprechwagen.
Crew: 4.
Weight: 5.435 tonnes.
Armament: 1 x 7.92 MG 34. 2 x 9mm MP 38.

This light telephone vehicle was produced to act as a cable layer under combat conditions–in addition, having laid telephone lines it could act as an observation vehicle.

Photo 10 MH 10106: Detailed view of the driving compartment of the Sd Kfz 250/2 – However, all of the series would have been very similar. Note: the inverted steering wheel, and to the left of the wheel clipped on the side wall are two spare glass vision blocks. On the right is the instrument panel dominated by the Tacometer (Rev counter). The radio operator/commander sits to the right with the Funksprechgeraet "F" wireless set in front of him. All other storage positions are the same as listed on page 2.

10

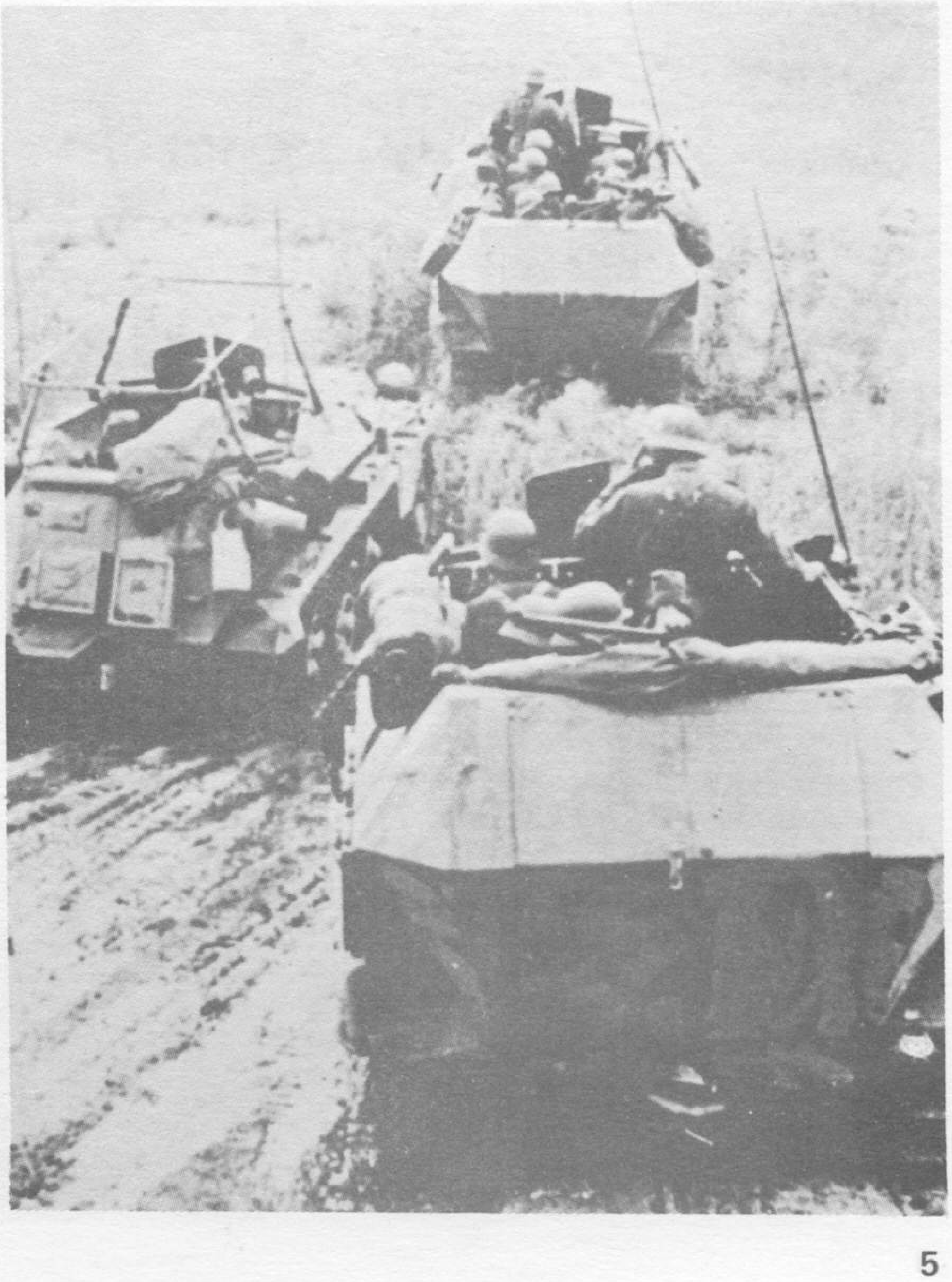




11

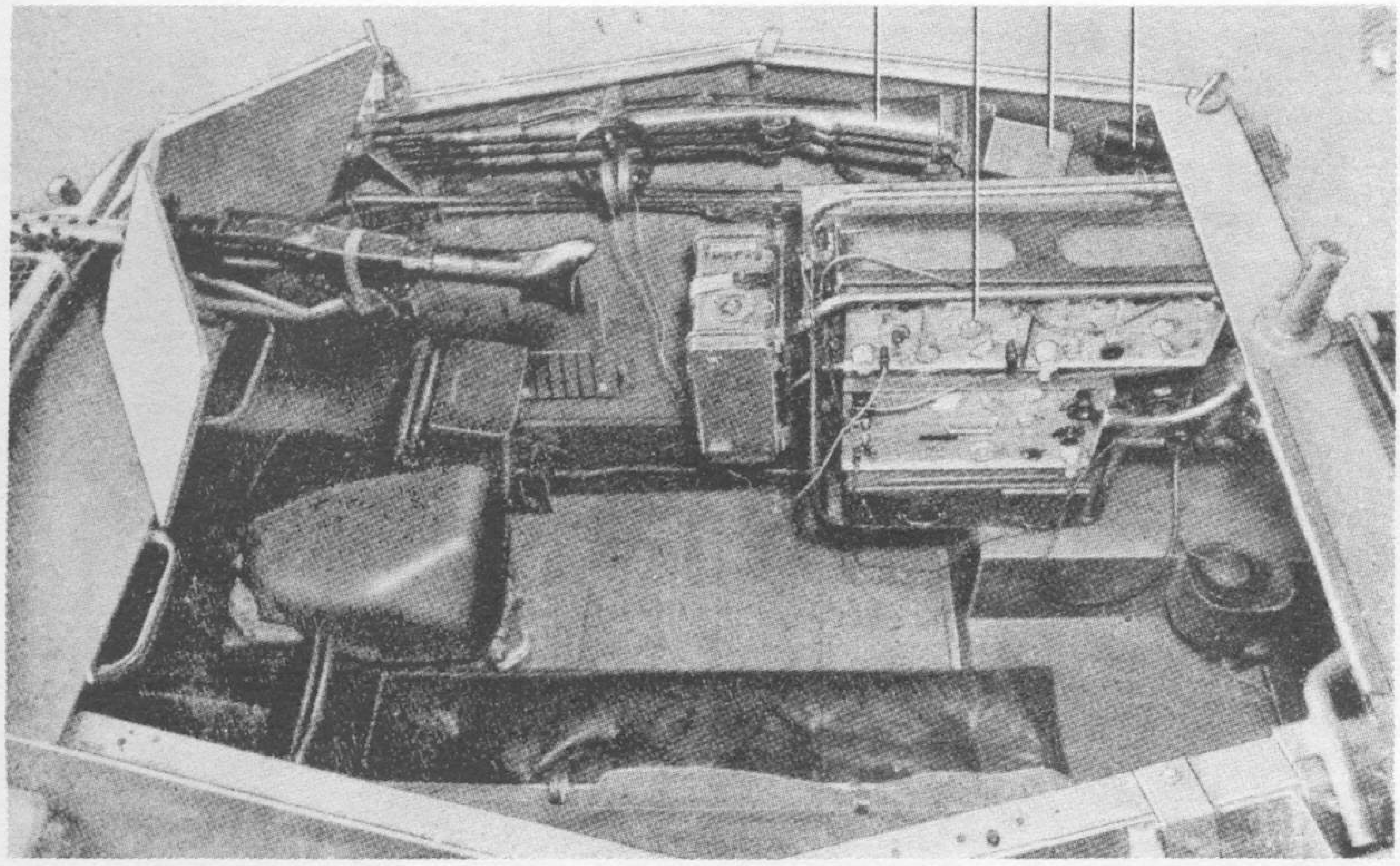
Sd Kfz 250/3.III.
This vehicle was for both ground and air co-ordination and was often used by the Luftwaffe. Not only is the FU7 set installed but also the FU8 used for inter divisional links – noted for the frame aerial on earlier models. This was a medium wave receiver and 30 watt sender a, operating on 1130-3000 Kc/s. On later models frame aerial was replaced by an 8 metre mast star aerial.
(Photo 11: Russian prisoners of war passing one of these Luftwaffe vehicles).

12



Sd Kfz 250/3.
Leichter Funkpanzer.
Crew: 4.
Weight: 5.345 tonnes.
In addition to the normal Funksprechgeraet F. radio telephone fitted to all the Sd Kfz 250 series, this light radio vehicle carried radio equipment suited to the needs of the formation to which it was attached. Three main versions existed differing only in their radio equipment Until 1942 frame antenna were used for the more powerful radio sets. However, improved sets required only the normal rod aerial.

Sd Kfz 250/3.IV.
Different radio equipment – types to suit formations such as engineers. Sturmgeschuetze units were equipped with either FU15 or FU 16. (Photo 12: shows a Funkpanzer attached to a Panzer Grenadier unit equipped with the 3 ton Sd Kfz 251 (See Part III of this Handbook). Radio antenna suggests that a FU10 or FU8 is fitted.



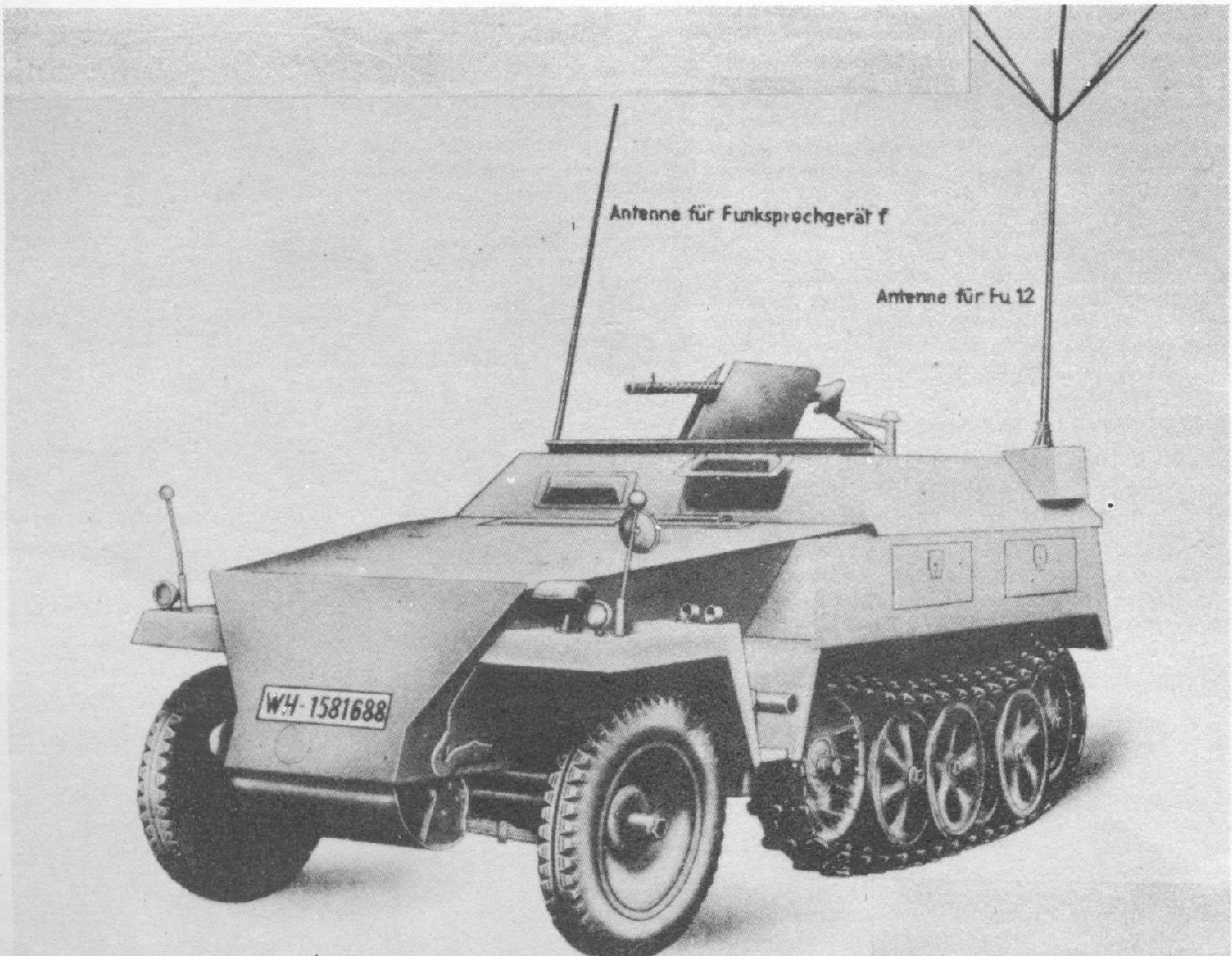
14

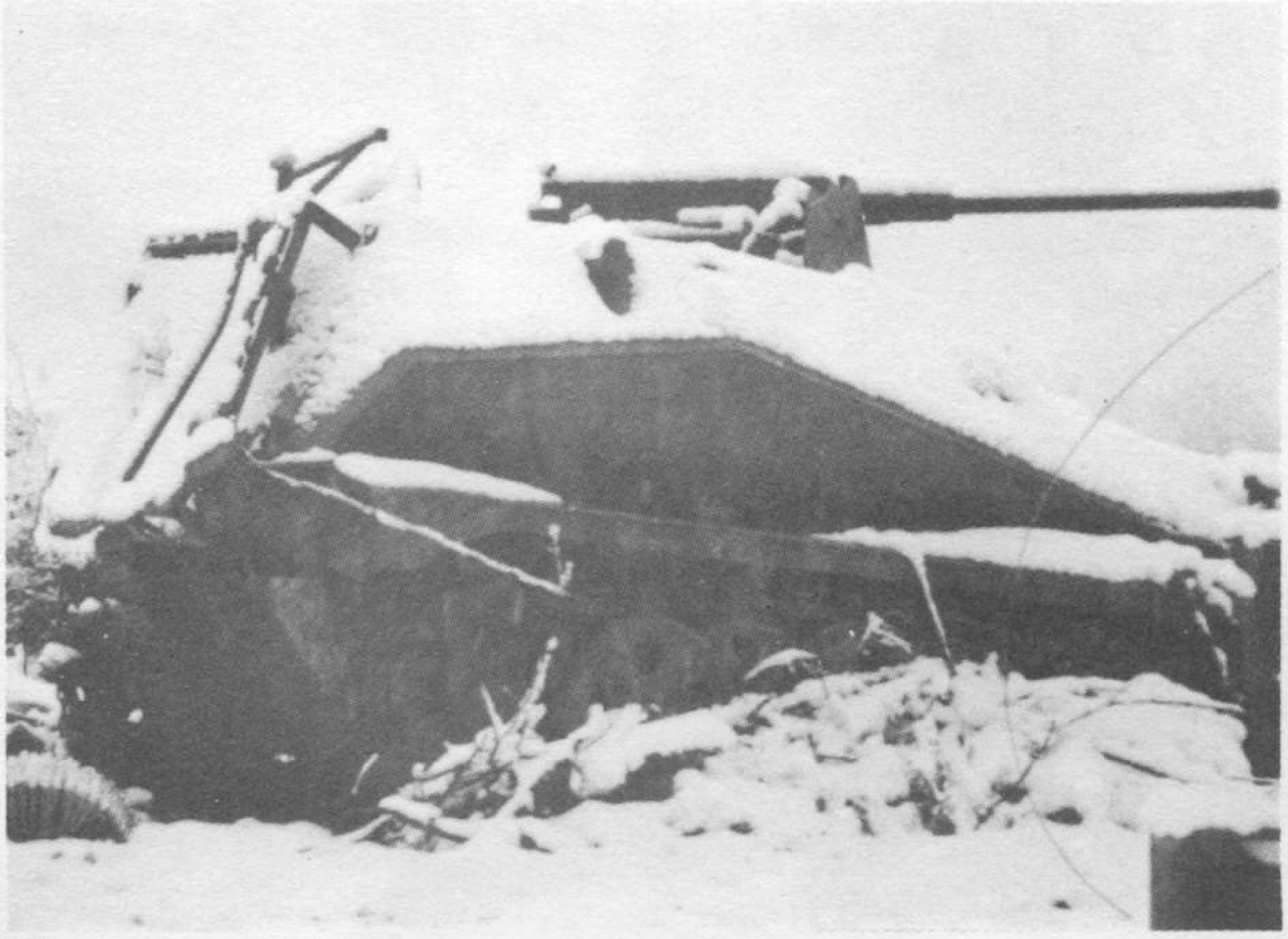
Photo 14: MH 10099. Shows the interior location of the FU 12 set and the general arrangement of these radio vehicles. Normal armament was the MG 34 or 42.

Sd Kfz 250/3. I
Leichter Funkpanzer.
This light radio command vehicle was equipped with a FU 12 medium wave receiver /80 watt sender, operating in the 835-3000/1120-3000-Kc/s band. An additional 2 metre rod aerial was fitted to the left rear of the vehicle. This wireless was used by the ground forces to control mobile formations.
Photo 13: Shows the exterior of a Sd Kfz 250/3.1 of the post 1943 pattern. Note that the star aerial is used in place of the earlier frame aerials.

Sd Kfz 250/3.II.
This vehicle while being nominally similar to the above was fitted with the FU 7 radio set. This was an ultra short wave receiver d1/20 watt sender d operating in the 42100-47800 Kc/s band with a 50 Km range. This radio was used for ground to air co-ordination. The aerial was the standard 2 metre rod.

13





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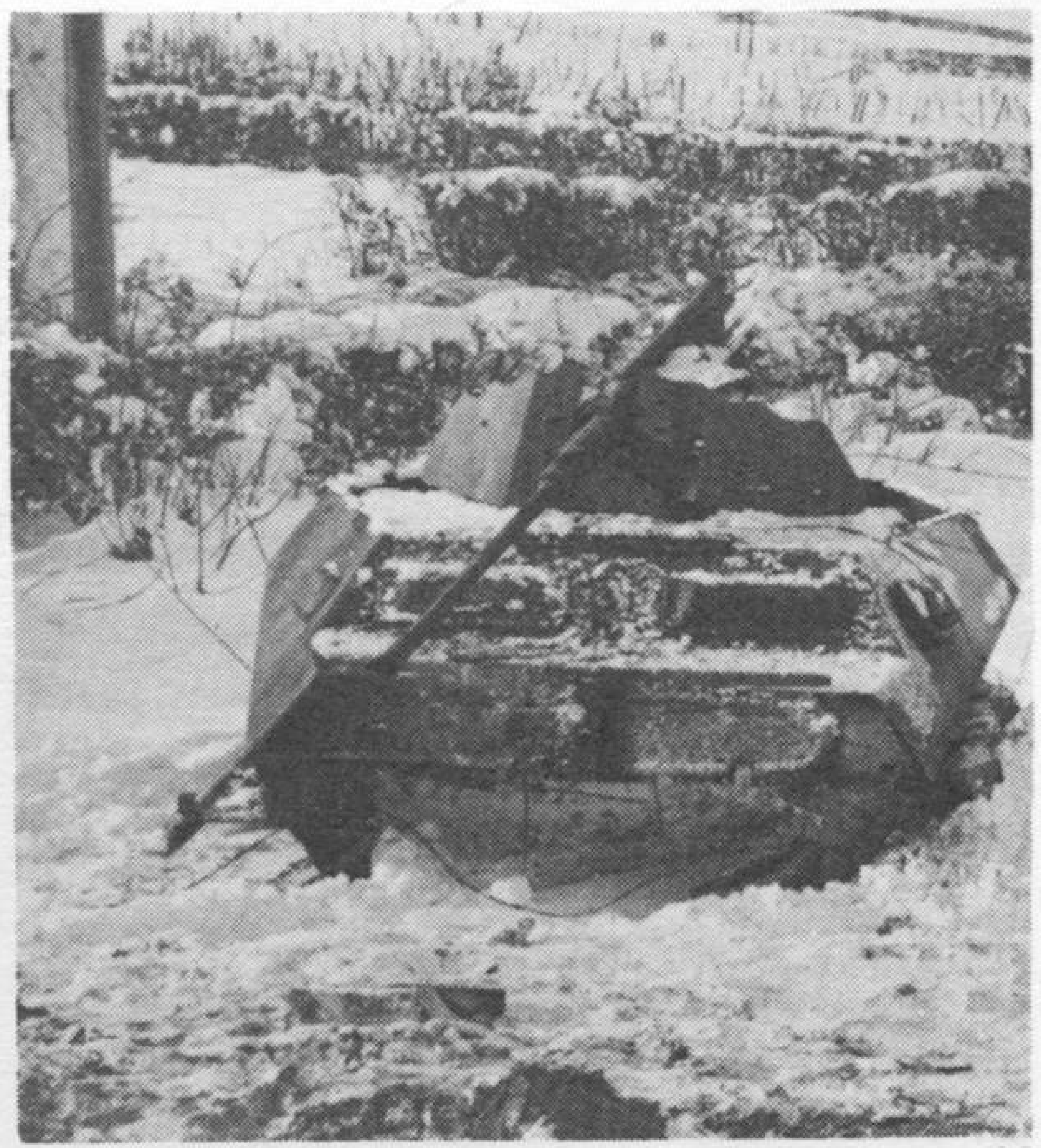


16

1944/45. Sd Kfz 250.
(Leichter Schuetzenpanzerwagen-2cm Flak 2cm KwK 38).
Crew: 4.
Weight:
Armament: 1 x 2cm Flak 38/KwK.

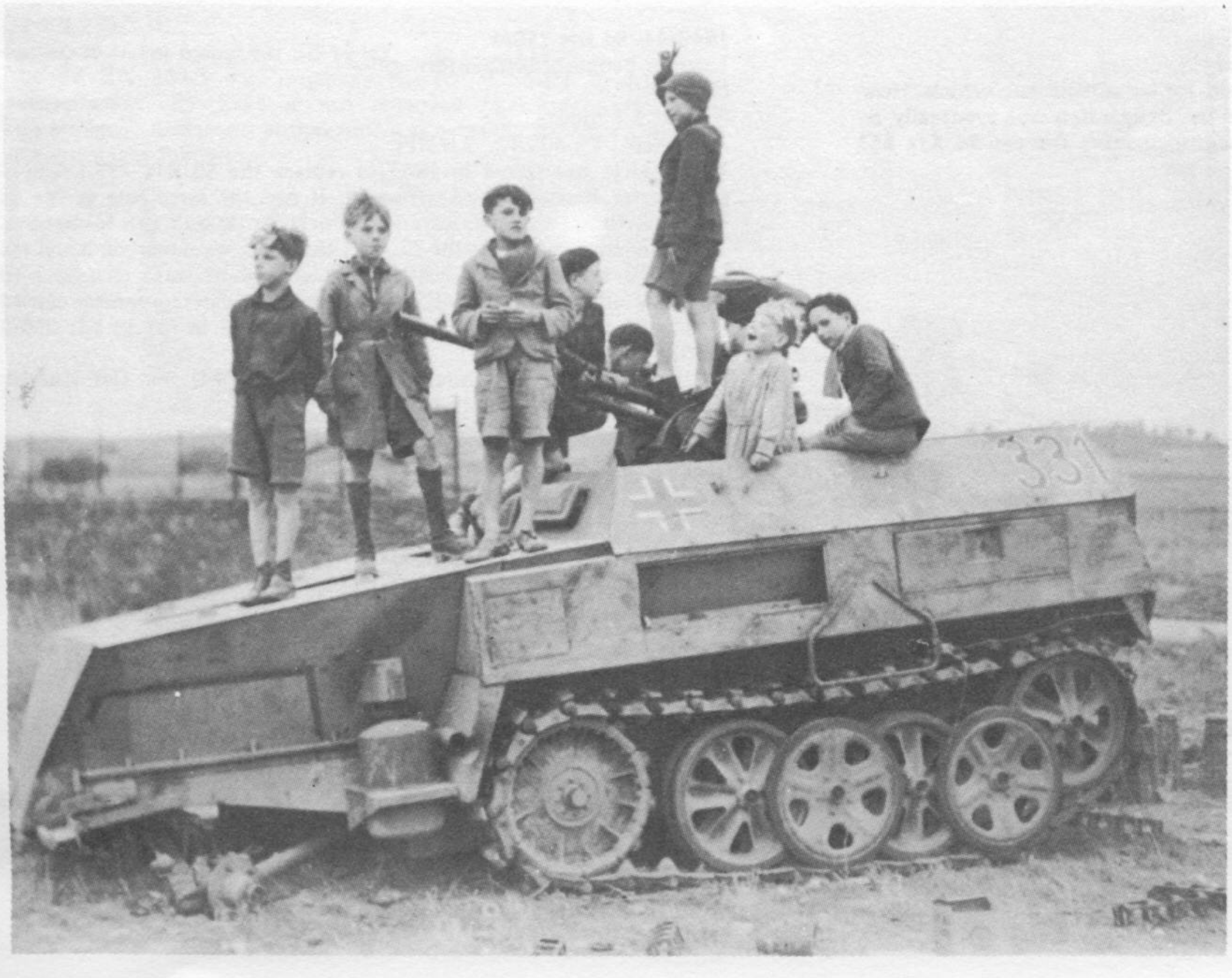
Although the official requirement for an anti-aircraft vehicle – Sd Kfz 250/4 Leichter Truppenluftschutzpanzerwagen – was not fulfilled, during the latter part of the War photographic evidence indicates that vehicles were issued for this role.
Other than photographs, no official information appears to be available.

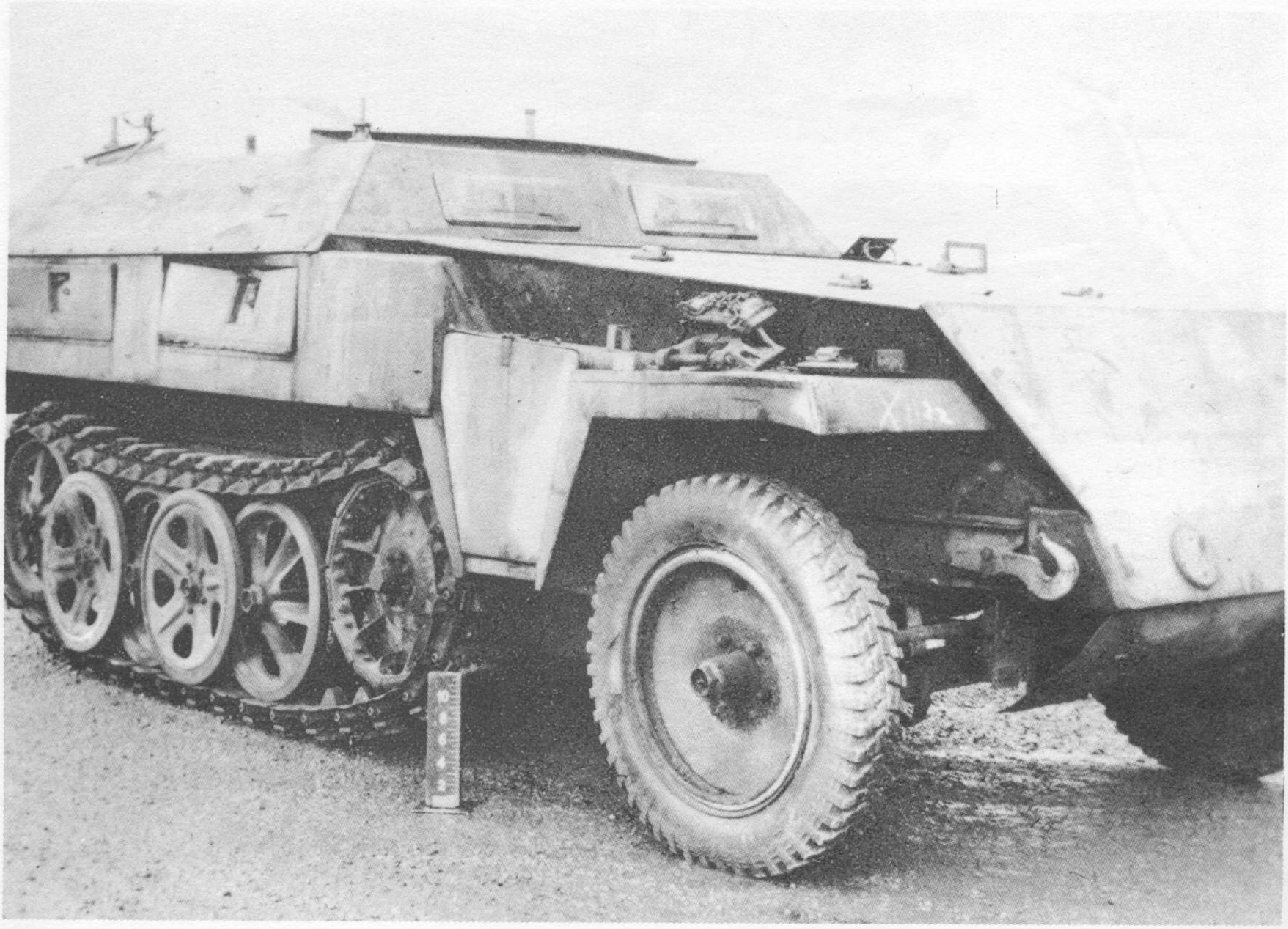
Photo 15: US Official. Shows what appears to be a KwK 38 mounted on the pre 1943 pattern Sd Kfz 250.

Photo 16: US Official. A similar vehicle to the above – but totally destroyed. These vehicles were from the same unit and were destroyed in early January 1945 during the collapse of the Ardennes offensive in Belgium.

Photo 17: This vehicle armed with the 2cm Flak 38 was destroyed near Peronne in France during September 1944.

17



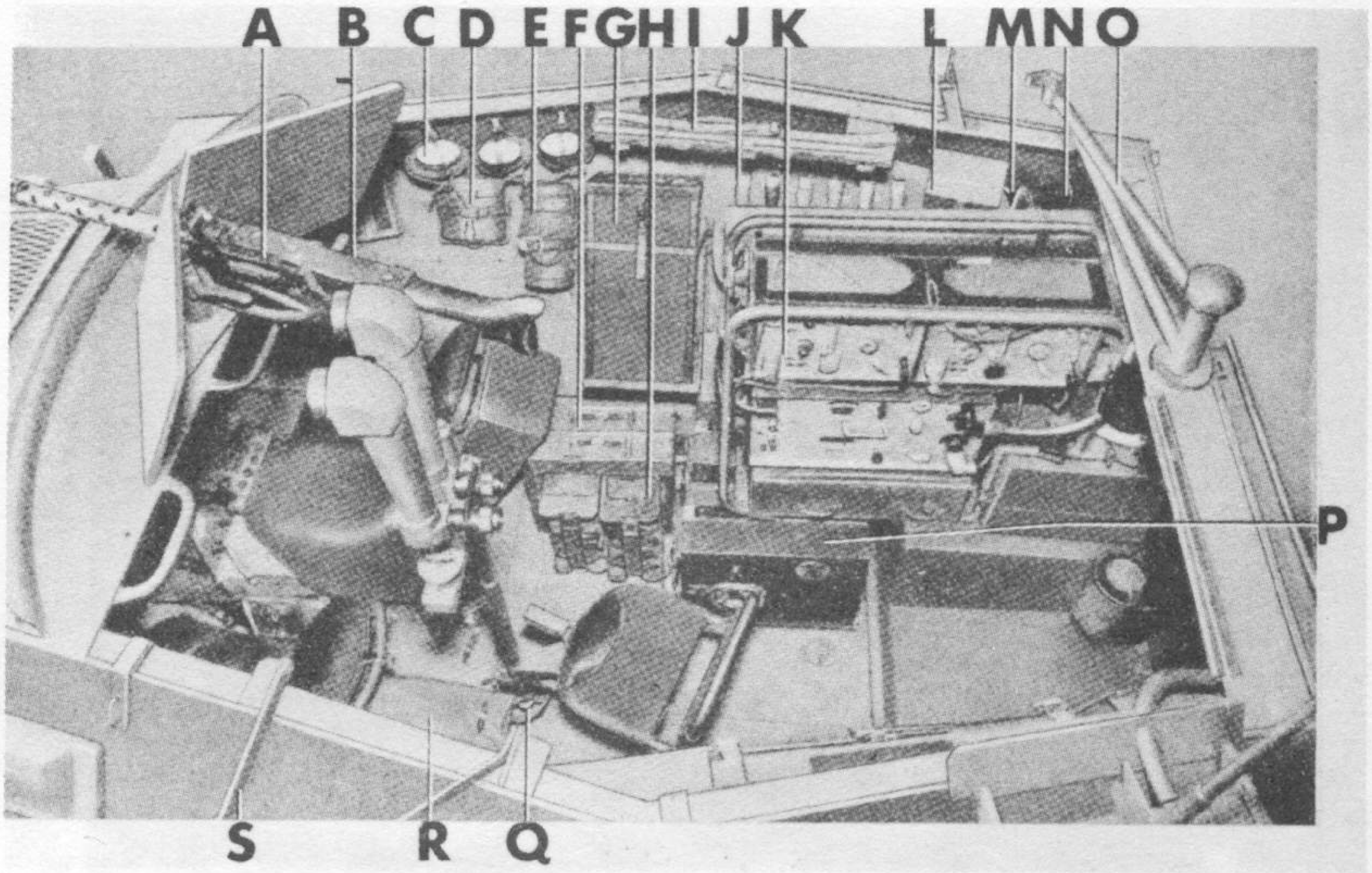


18

Sd Kfz 250/4.
Leichter Truppenluftschutzpanzerwagen.
This designation was originally issued for an anti-aircraft vehicle. However, since this did not materialise the designation was eventually reissued for the replacement Beobachtungspanzer for the Sd Kfz 253 described in detail on page

1943/45. Sd Kfz 250/4.
Leichter Beobachtungspanzerwagen.
Crew: 4.
Weight: 5.7 tonnes.
Armament: 1 x MG 42, 2 x MPi.
This vehicle was issued in 1943 to replace the Sd Kfz 253-Leichtergepanzerter Beobachtungskraftwagen. It had the same role as the Sd Kfz 253, to act as an observation vehicle for Assault gun formations. The radio equipment was the FU 15 Ultra short wave receiver h and the FU 16 10 watt transmitter h with an ultra short wave receiver h all operating on the 23000 - 24950 Kc/s band. Standard equipment carried by the Sd Kfz 250/4 was similar to that found in the Sd Kfz 250/5 described on page 9.
Photo 18: US Official. Note the position of the FU. Spr. Ger. F aerial on these late pattern vehicles.

19



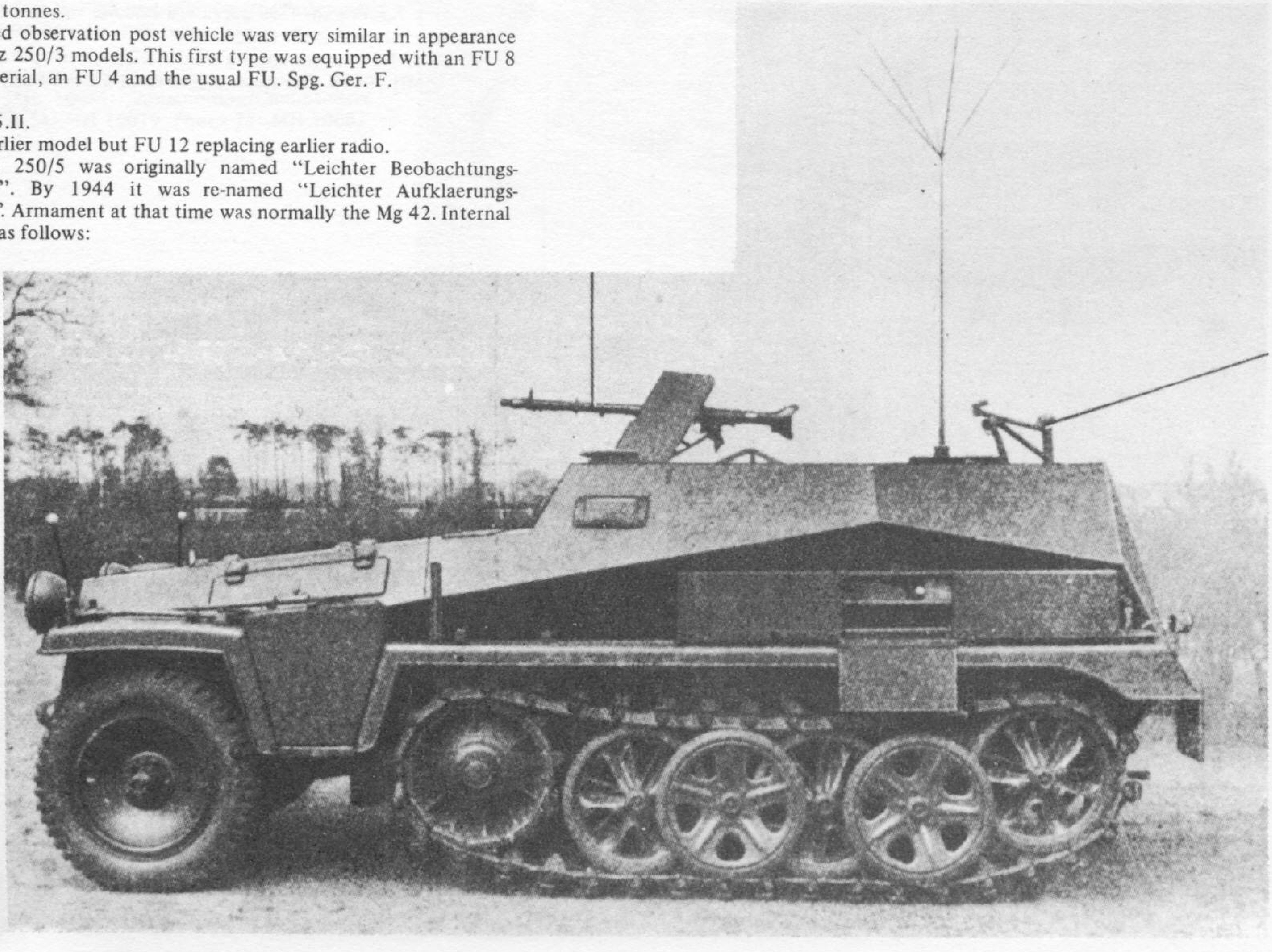
A	1 x 7.92 MG 34 in pivot mounting.
B	2 x 9mm MP 38 and ammunition.
C	Waterbottles.
D	Mess tins.
E	Gas Masks
F	MG 38 ammunition boxes.
G	Box for Scissors periscope 14 Z Si–shown mounted.
H	4 belt drum holders.
I	Spare barrel for MG 34 in container.
J	6 x Stielhandgranate 24 (Stick grenades).
K	FU 12 sets.
L	12 rounds of signal ammunition.
M	Behind wireless the following are stowed; Used ammunition sacks, four clothing bags, Binoculars, periscope and Tarpaulin.
N	Verey signal pistol.
O	AA defence pivot for MG 34.
P	Wireless accessories box.
Q	Floor clamp for periscope.
R	Clothing bags
S	Clamp to steady periscope support.

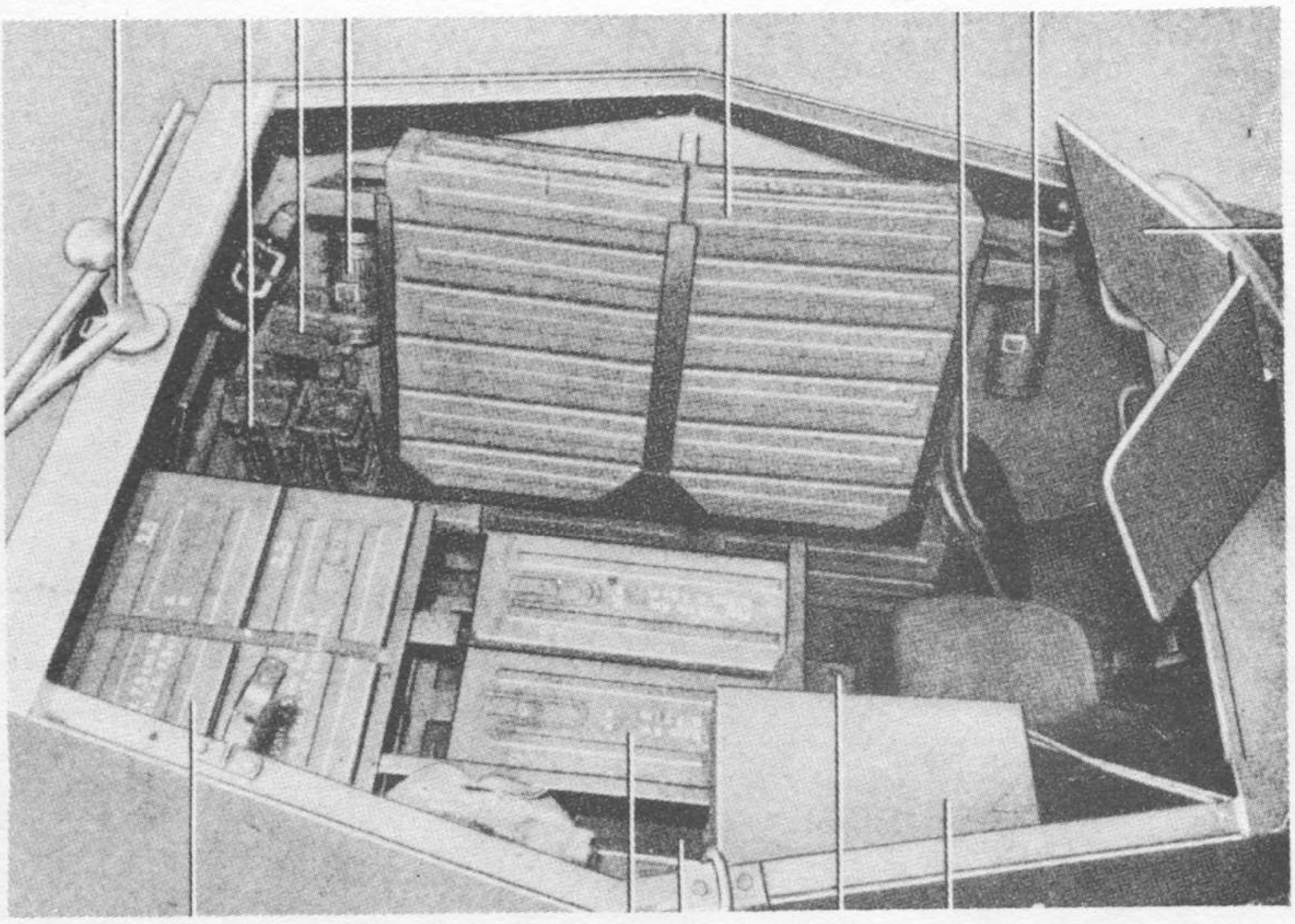
(Photo 19: MH 10074).
(Photo 20: MH 10101).

Sd Kfz 250/5.I
Leichter Beobachtungspanzerwagen.
Crew: 4.
Weight: 5.35 tonnes.
This armoured observation post vehicle was very similar in appearance to the Sd Kfz 250/3 models. This first type was equipped with an FU 8 with Frame aerial, an FU 4 and the usual FU. Spg. Ger. F.

Sd Kfz 250/5.II.
Similar to earlier model but FU 12 replacing earlier radio.
The Sd Kfz 250/5 was originally named "Leichter Beobachtungspanzerwagen". By 1944 it was re-named "Leichter Aufklaerungspanzerwagen". Armament at that time was normally the Mg 42. Internal stowage was as follows:

20





21

Sd Kfz 250/6.
Leichter Munitionspanzerwagen Ausf A.–fuer Sturmgeschuetz.
7.5cm Kanone (Kurz) Ausf A bis E.
Crew: 2.
Weight: 5.945 tonnes.

This was an ammunition carrier attached to units of Assault guns armed with the short barrelled 7.5cm gun (See Page 6 Bellona Handbook No. 1 part 1 for details of these Assault Guns). It had the ability to carry 70 rounds of the 7.5cm ammunition – 2 rounds in each of the 35 boxes. This model was discontinued after 1942 when the Assault guns were armed with the long 7.5cm gun.

Photo 21: MH 10075. The Ausf. A seen from the right hand side.

These ammunition carriers were introduced to replace the Sd Kfz 252 described on page 17.

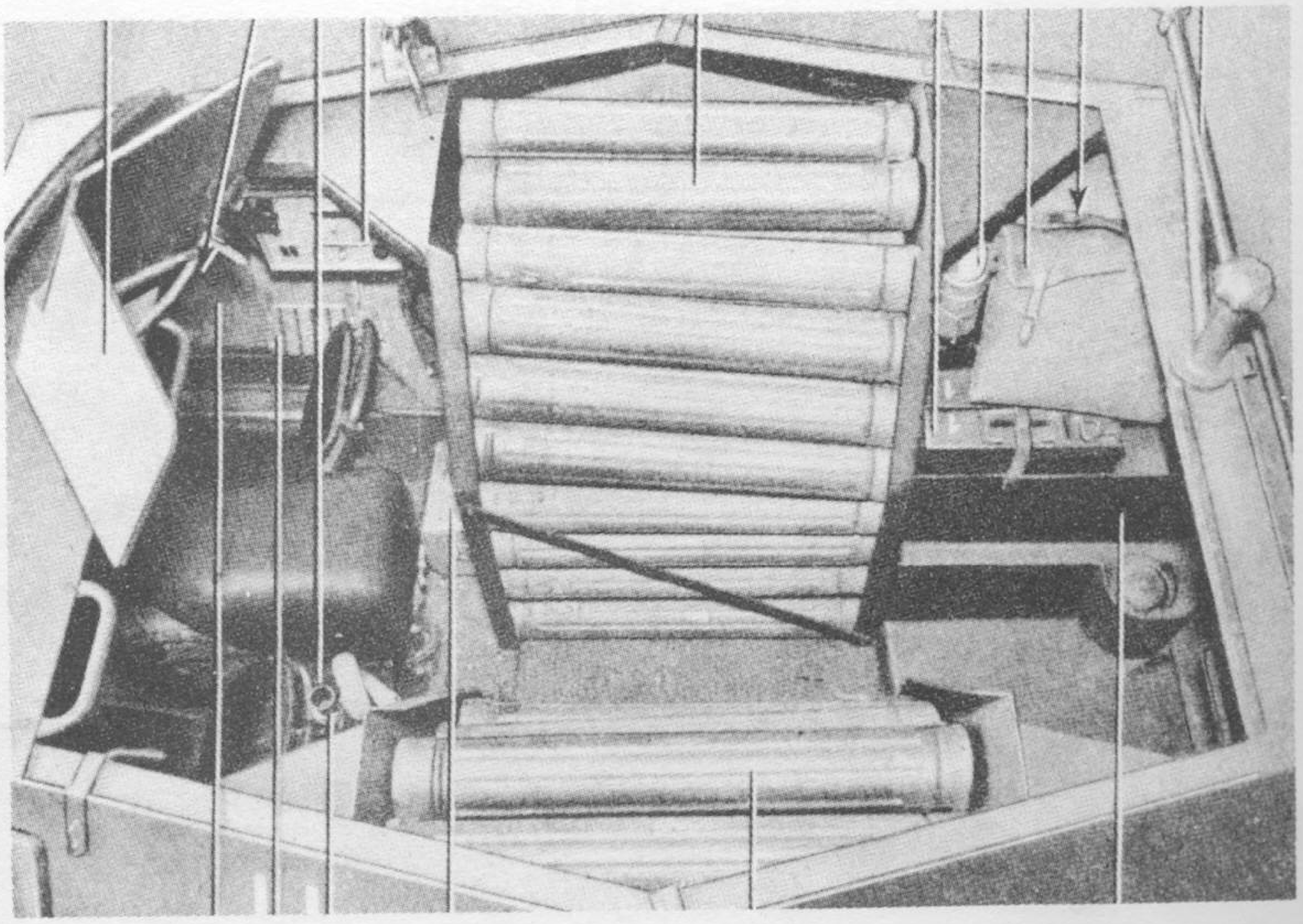
Internal stowage of equipment was varied to suit layout. Small items and crew belongings were kept at rear of ammunition racks while FU. Spr. Ger. F was moved to side wall and MG 34 stowed on rack behind the driver. On the Ausf. B the vision window on the right hand side differed from that of the basic vehicle.

Sd Kfz 250/6.
Leichter Munitionspanzer Ausf. B.
-fuer 7.5cm Sturmgeschuetz 40. Ausf F und G.
Crew: 2.
Weight: 6.09 tonnes.

Modified internal layout to accommodate the bigger ammunition used by the long 7.5cm guns (See pages 7/8 Bellona Handbook No. 1 Part I for details of these Assault Guns).
60 rounds of 7.5 cm ammunition were carried.

Photo 22: MH 10078. The Ausf. B seen from the left hand side.

22



Sd Kfz 250/7.
Leichter Schuetzenpanzerwagen
(Schwerer Granat Werfer).
Crew: 5
Weight: 5.61 tonnes.
Armament: 1 x MG 34, 2 x MP 38.
Introduced as a support vehicle to carry the heavy 8 cm mortar speedily into action. This Sd Kfz 250/7 proved most successful.

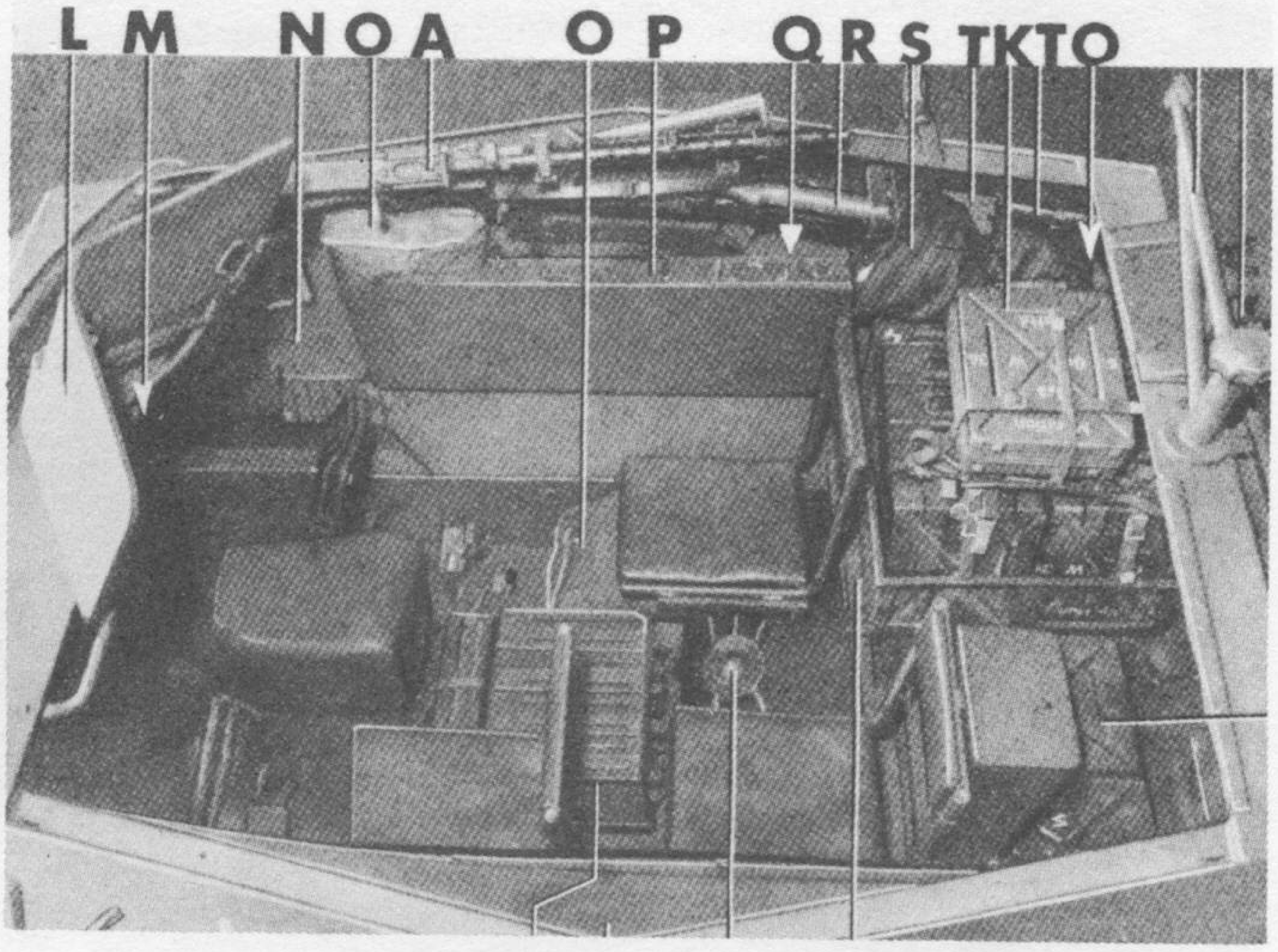
Sd Kfz 250/7.
Leichter Schuetzenpanzerwagen
(Munitionsfahrzeug).
Crew: 4
Weight: 5.38 tonnes.
This vehicle was similar but did not carry a mortar—the MG 34 was fitted in an armoured shield. 66 rounds of mortar ammunition were carried. This vehicle was also used by Platoon Commanders.

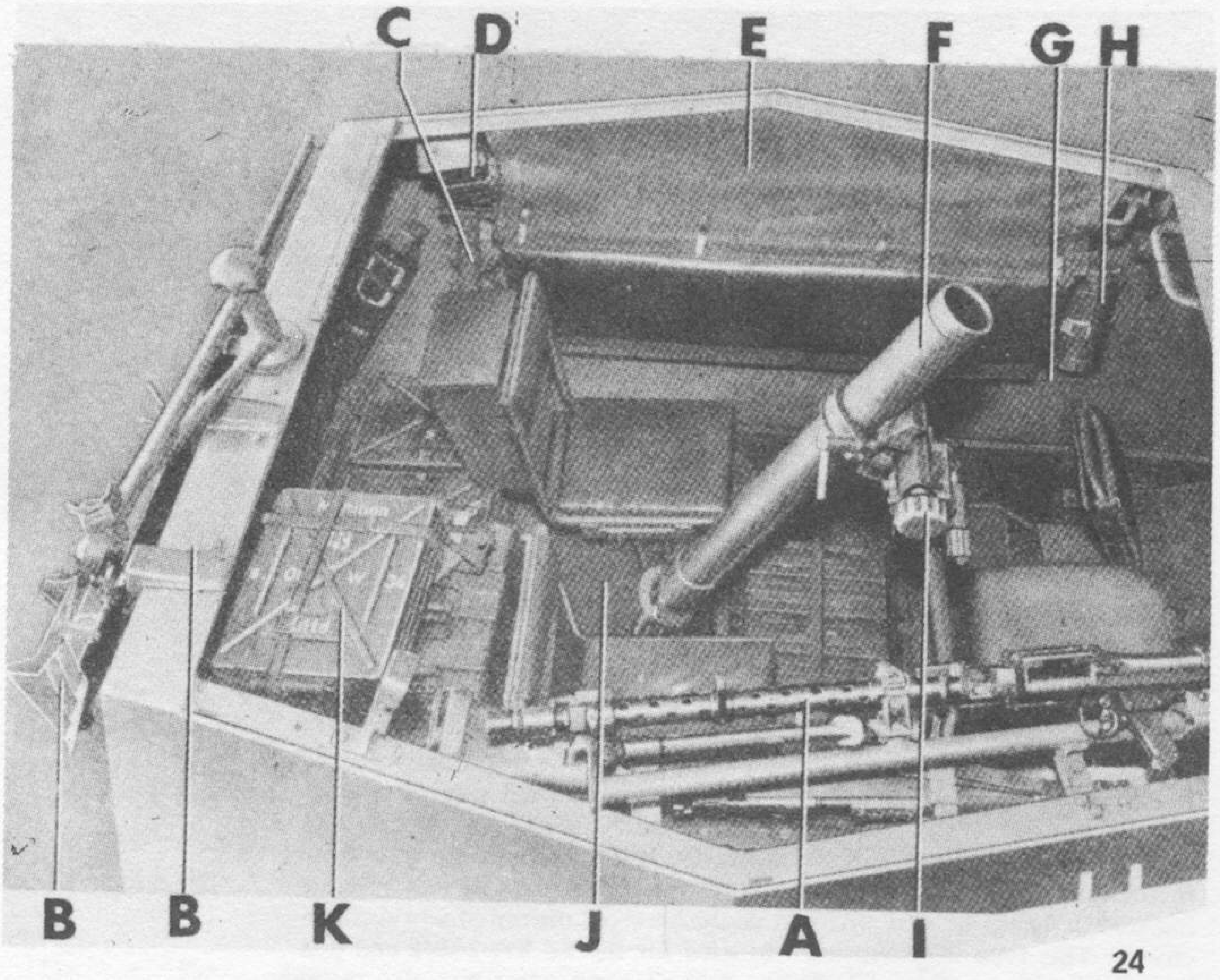
Equipment layout for these vehicles was as follows:

A	1 x 7.92mm MG 34.
B	Rack and field baseplate for dismounted use of 8cm Gr.W.34.
C	Belt drum container for MG 34.
D	Spent ammunition sack.
E	Baggage box containing among others: Pressure lubricator, breech mechanism and artificer's box for Gr. W.34, Belt drum for Mr 34 Carbide lantern, telephone equipment and clothing bags.
F	8cm Schwere Grantewerfer 34. (8cm Gr. W.34).
G	Cover hoops.
H	Gas mask.
I	Bipod mounting for 8cm Gr. W.34.
J	Fixed baseplate for 8cm Gr. W.34.
K	Mortar ammunition—21 boxes.
L	Armoured MG 34 mounting (on Ammunition and Commanders vehicles only).
M	Fu. Spr. Ger. F (Wireless)
N	2 x MP 38 machine pistols.
O	Clothing bag.
P	4 boxes of small arms ammunition and box of accessories.
Q	Baggage box containing: spare barrels, and container for MG 34 and Binoculars, Periscope.
R	3 x 7.92mm Kar 98K rifles.
S	Tarpaulin.
T	Verey pistol and ammunition.

Photo 23: MH 10081: Ammunition/Commanders Vehicle. Photo 24: MH 10079. Photo 25: MH 10082 mortar vehicle.

23





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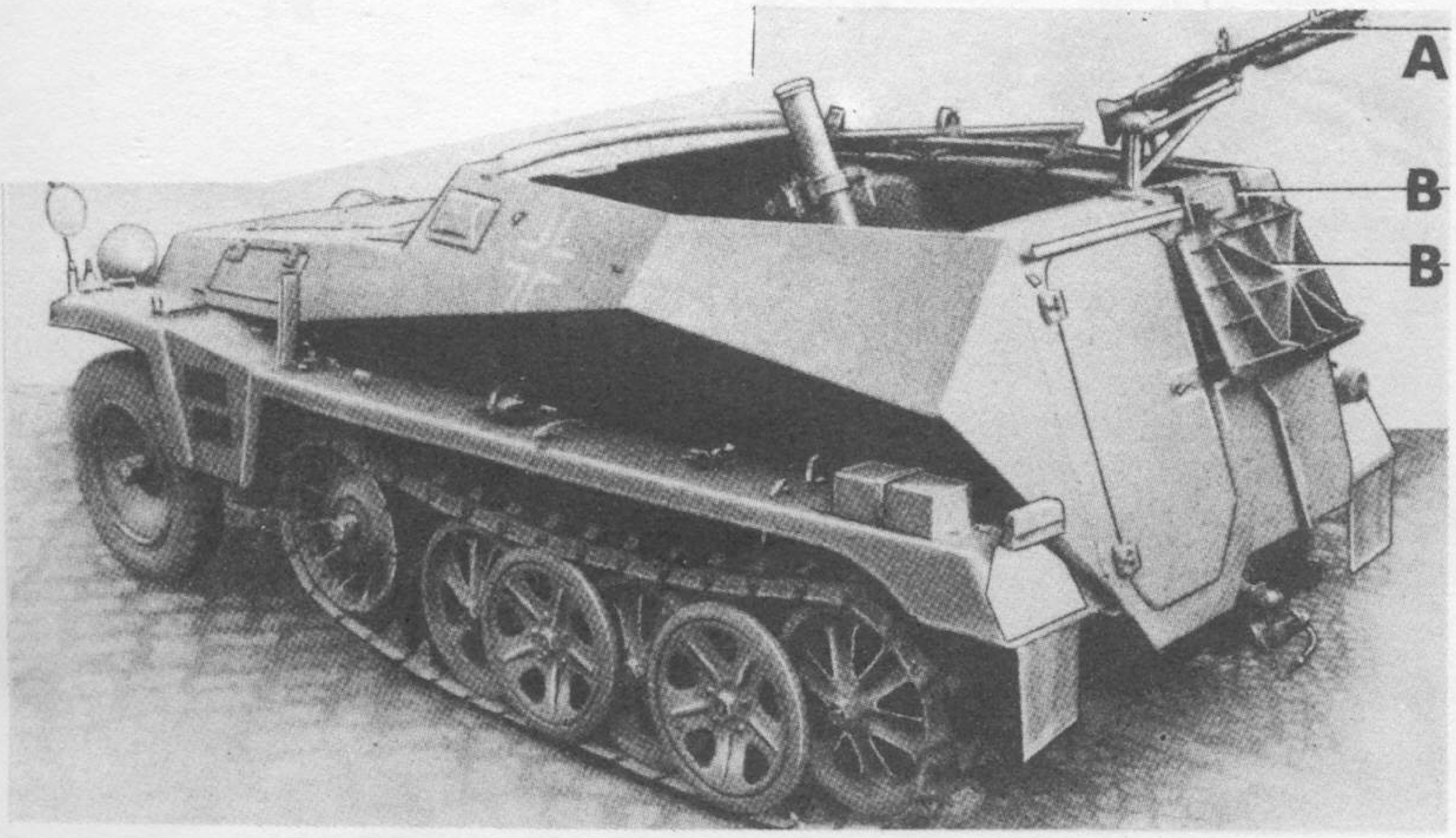

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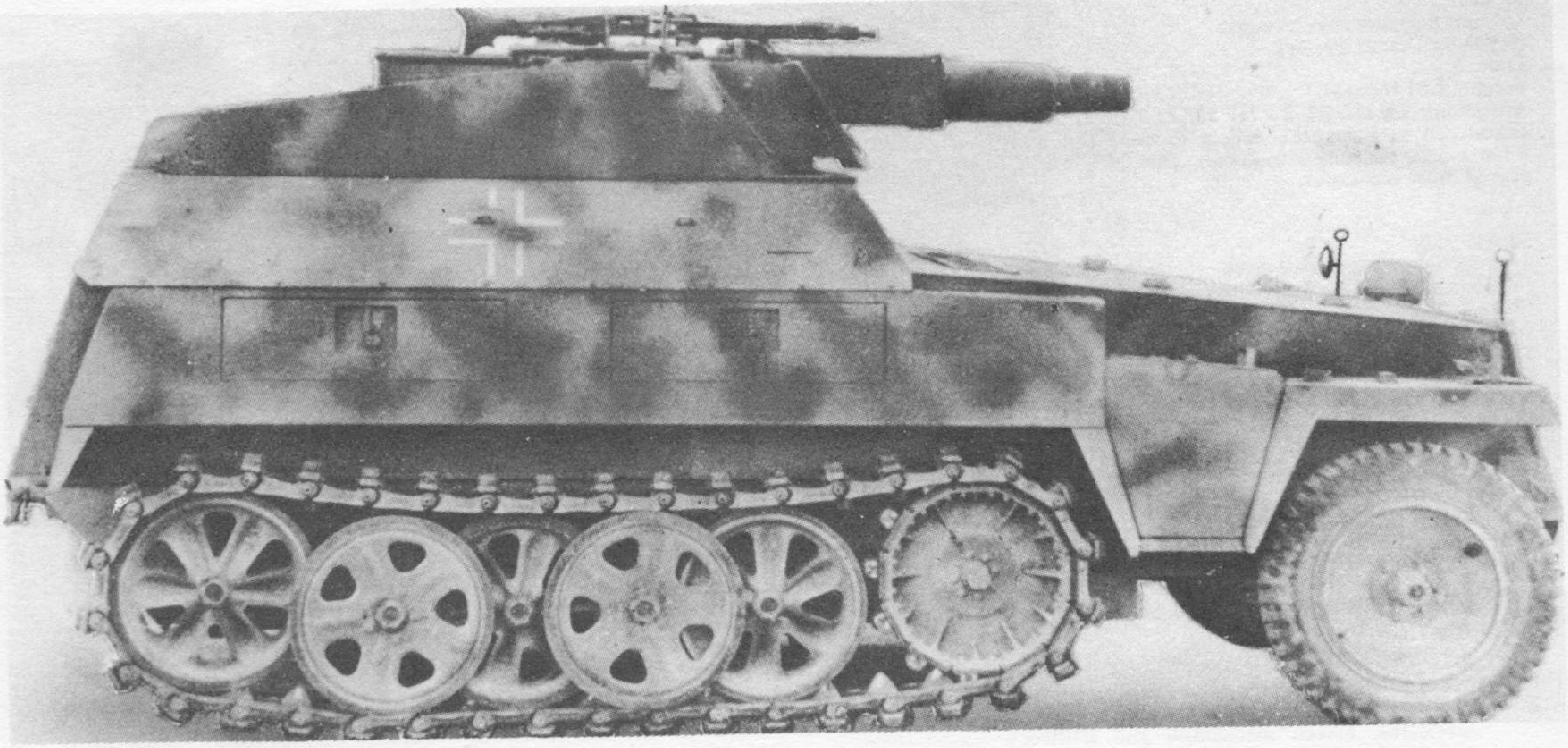
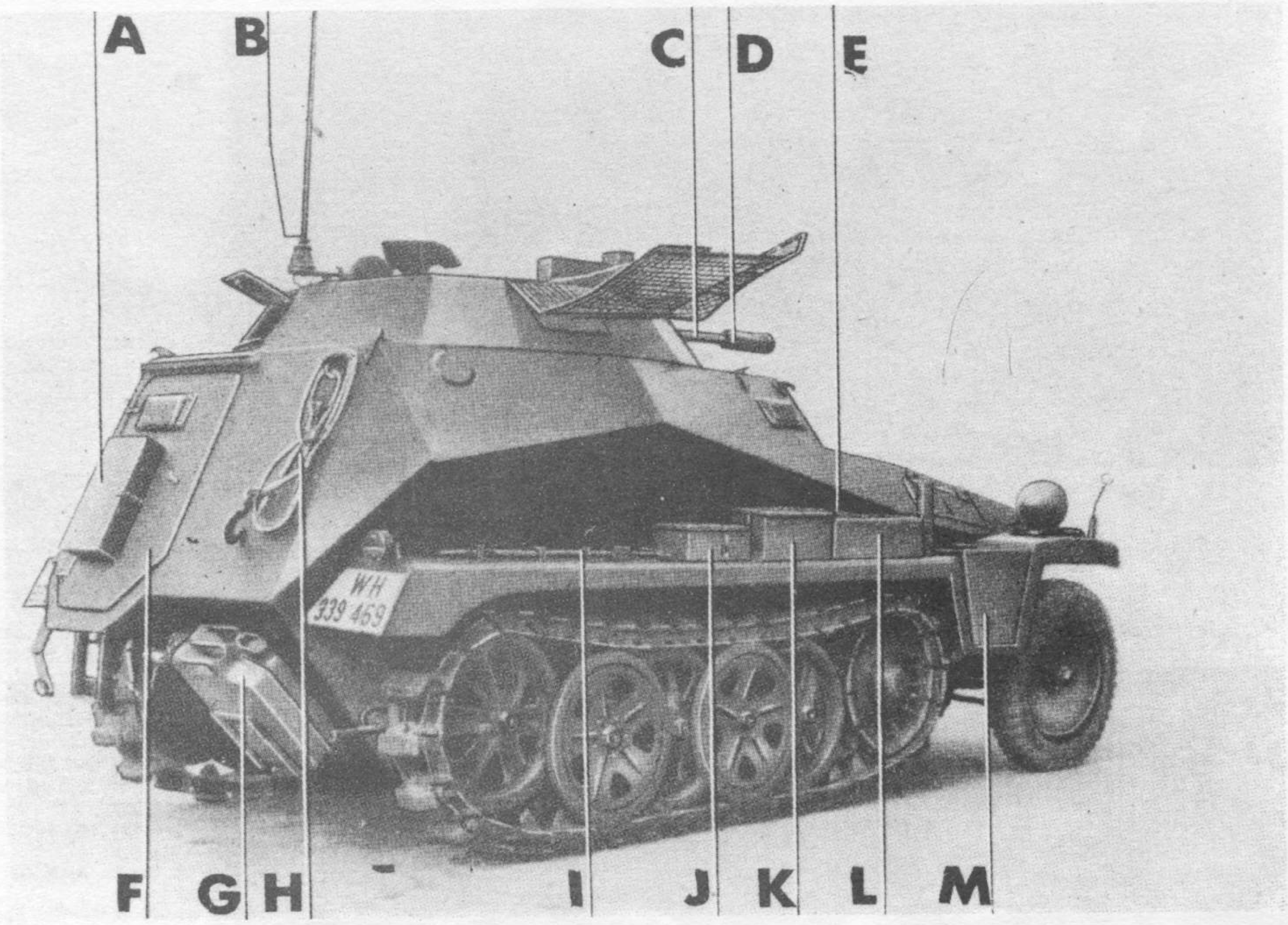


26

Sd Kfz 250/8
Leichter Schuetzenpanzerwagen mit 7.5 cm KwK 37.
Crew: 3.
Weight: 6 tonnes.
Armament: 1 x 7.5 cm KwK 37 or K51 L/24. 1 x MG 34 or 42, 2 x MP 38.

The short barrelled 7.5 cm gun became available in large numbers from 1943 as it was no longer used in either the Pz Kpfw IV or Sturmgeschuetze vehicles. It was fitted for a short time to the Ausf N of the Pz Kpfw III (See Bellona Prints Series 21) but finally it was passed over for use in armoured carriers and armoured cars. At first it was fitted only to the Medium 3t Sd Kfz 251/9 and the Sd Kfz 233 eight wheeled armoured car, both mountings requiring structural modification of the basic vehicle. However, in mid 1943 a new mounting was designed so that this gun could be fixed on top of any suitable chassis. This type of mounting was used for the Sd Kfz 250/8 and was based upon the late model chassis. A similar mounting was also to be found upon the Sd Kfz 234/3 eight wheeled armoured car. These Sd Kfz 250/8 vehicles replaced the Sd Kfz 250/10 armed with the 3.7 cm PAK 35/36.

Photo 26: – HU 4112. A late model of the Sd Kfz 250/8 armed with an MG 42 machine gun which was mounted so as to give co-axial fire to the 7.5 cm KwK and also to act as a ranging gun for the latter.



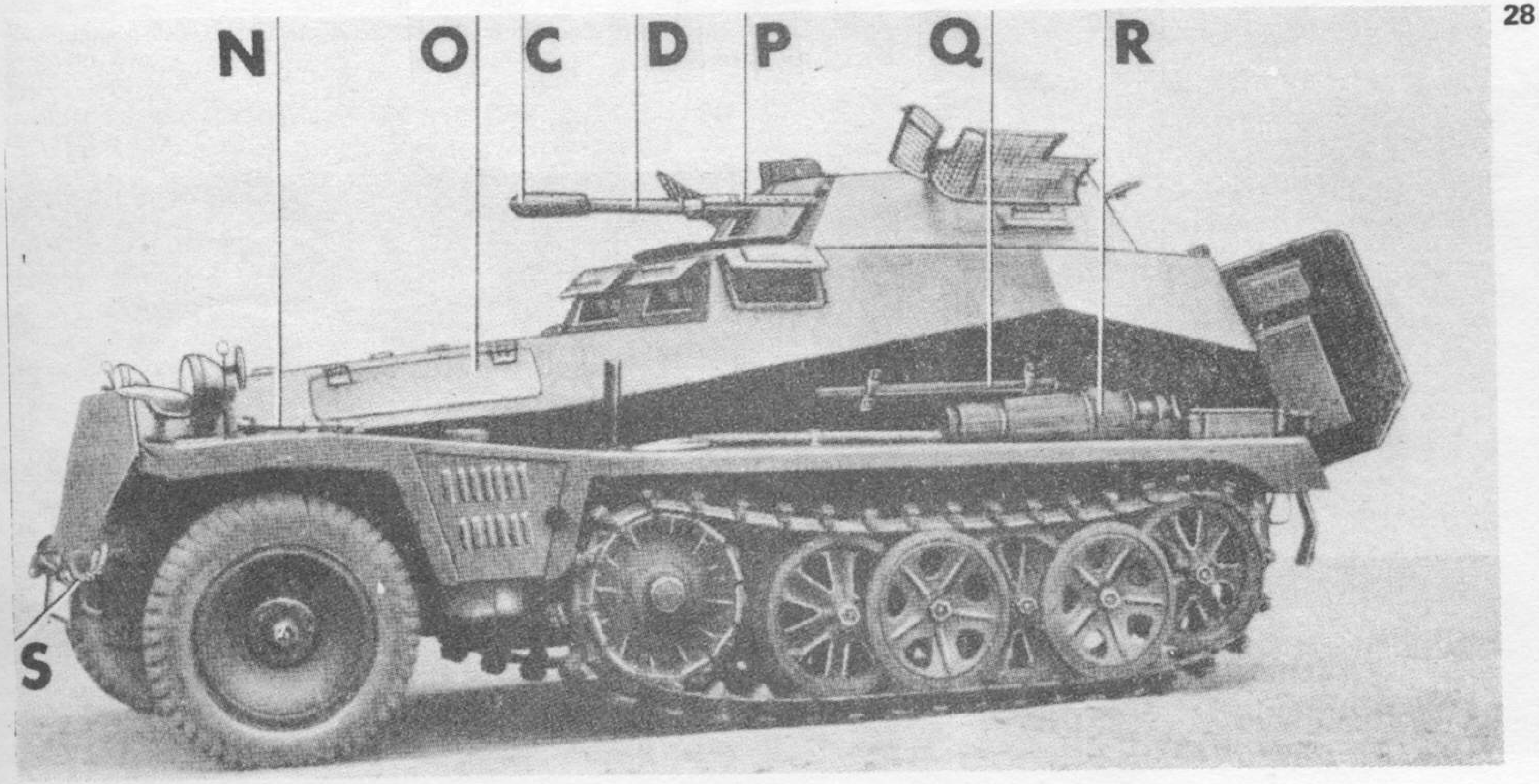
27

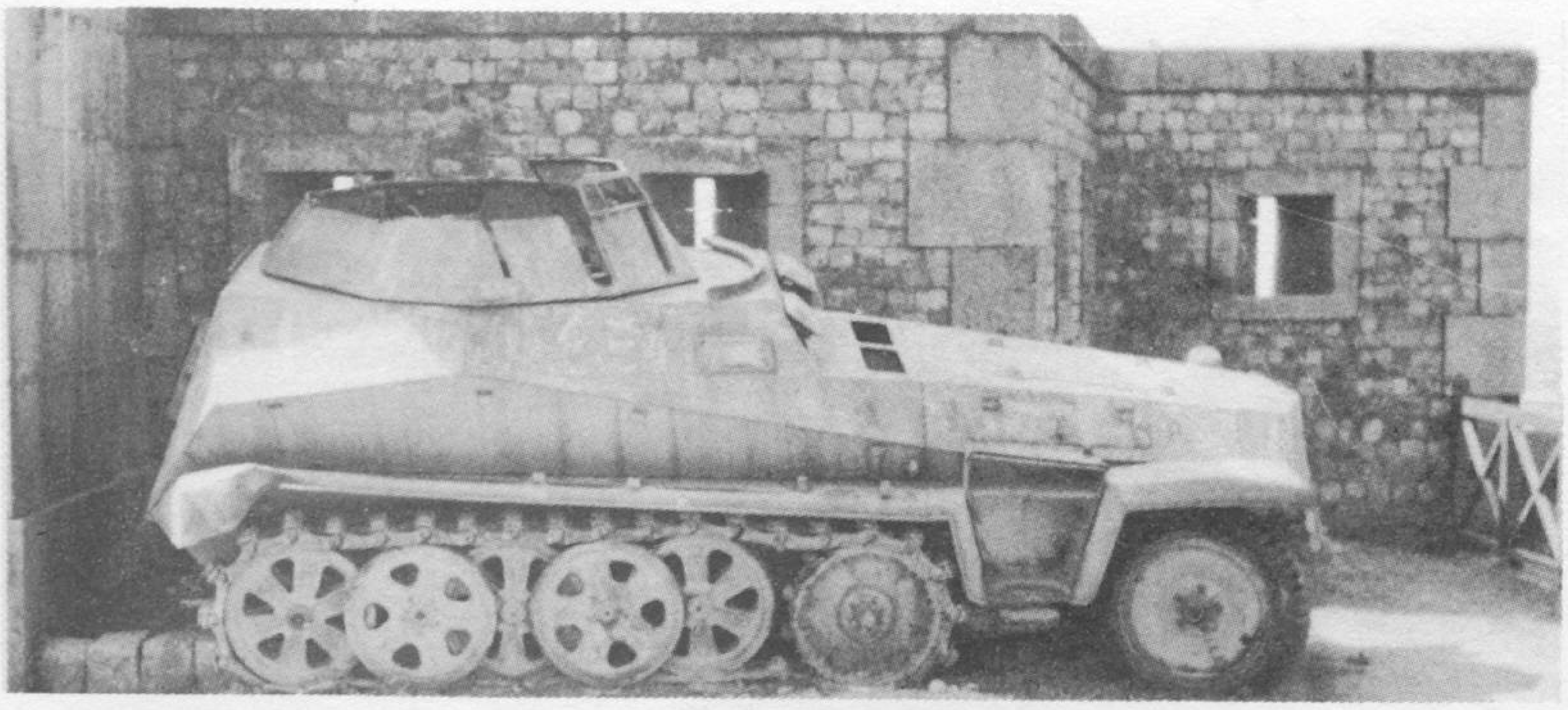
Sd Kfz 250/9.
Leichter Schuetzenpanzerwagen (2 cm).
Crew: 3.
Weight: 5.9 tonnes.
Armament: 1 x 2 cm KwK 38. 1 x MG 34 or 42.
(Description on page 14).

The equipment stowed upon this recconaissance vehicle was distributed as shown in Photo 27: MH 10083 and Photo 28: MH 10084.

A	Box of 3 detonating cords for demolition charges.
B	Aerial for FU 12 wireless.
C	2 cm KwK 38 cannon.
D	Muzzle protector cover.
E	Spare parts kit for 2 cm KwK 38.
F	rear door.
G	20 litre petrol can
H	wire towing rope.
I	starting handle.
J	4 demolition charges.
K	Cleaning kit for 2 cm KwK 38
L	Box of iron rations.
M	Tool boxes.
N	large pair of wire cutters.
O	Engine access hatch – some small items are stored.beneath the bonnet.
P	1 x 7.92 mm MG 34 machine gun.
Q	Pickaxe.
R	Tarpaulin and covers for 2 cm amd MG 34.
S	wire towing rope.

28





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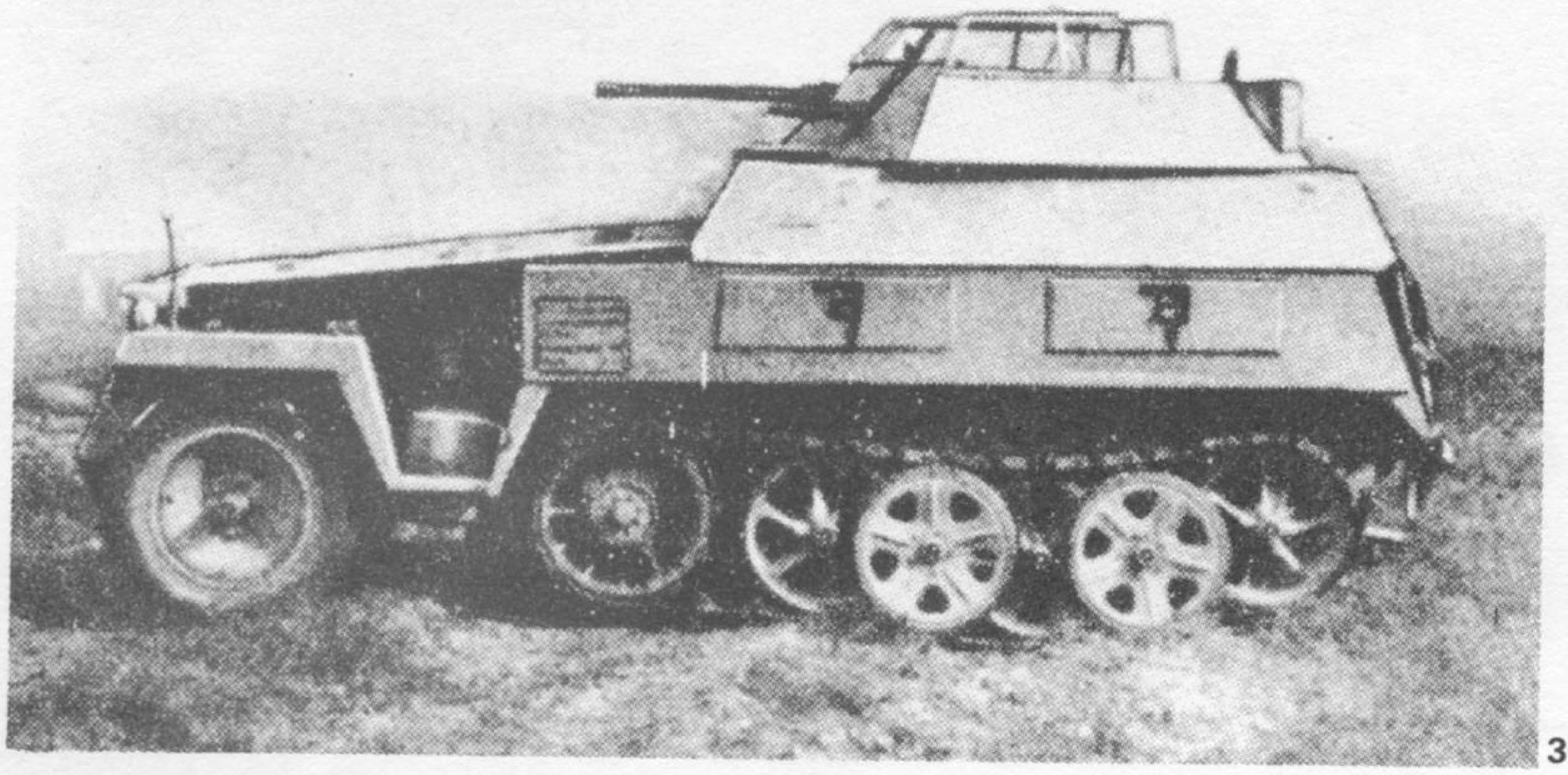


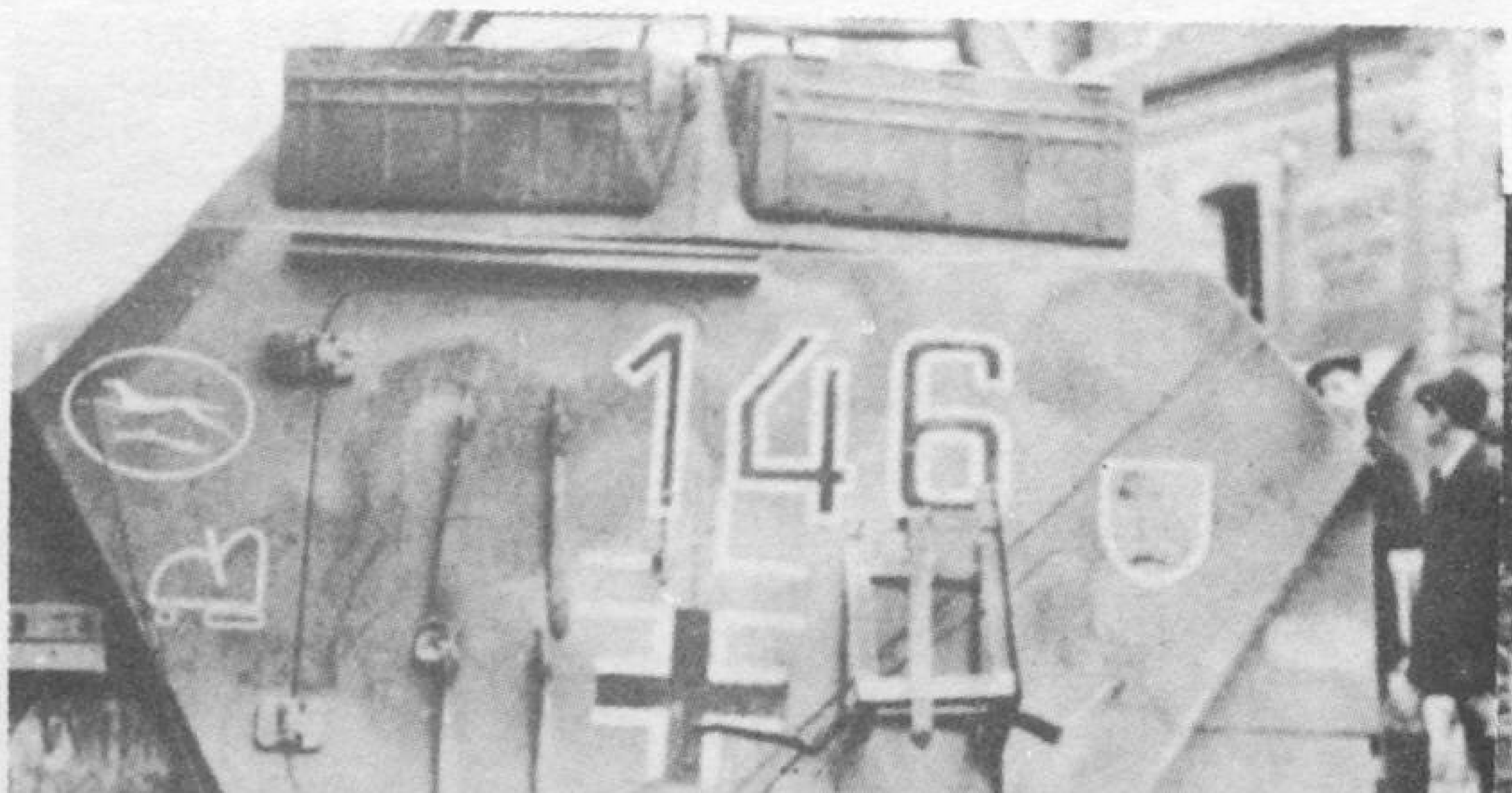
30

Sd Kfz 250/9.
Leichter Schuetzenpanzerwagen (2 cm).
Crew: 3.
Weight: 5.9 tonnes.
Armament: 1 x 2 cm KwK 38, 1 x MG 34, 1 x MP 38.

During the first winter campaign fought in Russia the German Ordnance Office realised the urgent need for a versatile cross country reconnaissance vehicle. The four wheel armoured cars already in service were often incapable of completing their missions due to difficulties encountered with both terrain and weather. Time and cost ruled out the design of a new vehicle at that time so a compromise was adopted in the form of the Sd Kfz 250/9. This was the turret and equipment of the Sd Kfz 222 armoured car *mounted in the chassis of the Sd Kfz* 250 – a simple conversion which proved relatively successful. The turret was for better vision, open topped, but was protected by a mesh screen to prevent grenades from getting into the car. The 2 cm and the MG 34 could be elevated to about plus 80 degrees to engage aircraft as well as the normal ground targets.

Photo 29: Shows a destroyed unit of the early pattern described in detail on page 13. Note that the turrets of this type were of the standard 10 sided version used on the Sd Kfz 222 armoured car.
Photo 30: MH 8957. Late model of the Sd Kfz 250/9.
Photo 31 and 32: Icks Collection. Interesting detail photographs of the late model. Note that these late vehicles are fitted with a simplified six sided turret.

31



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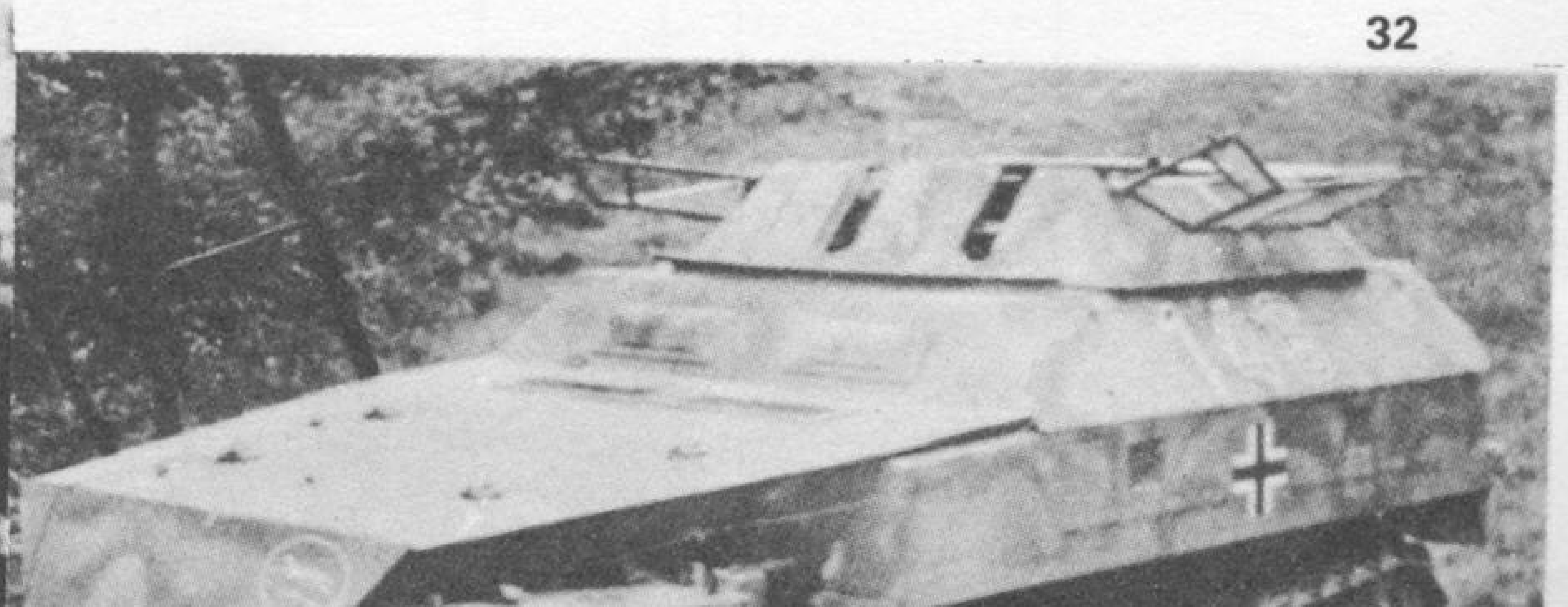
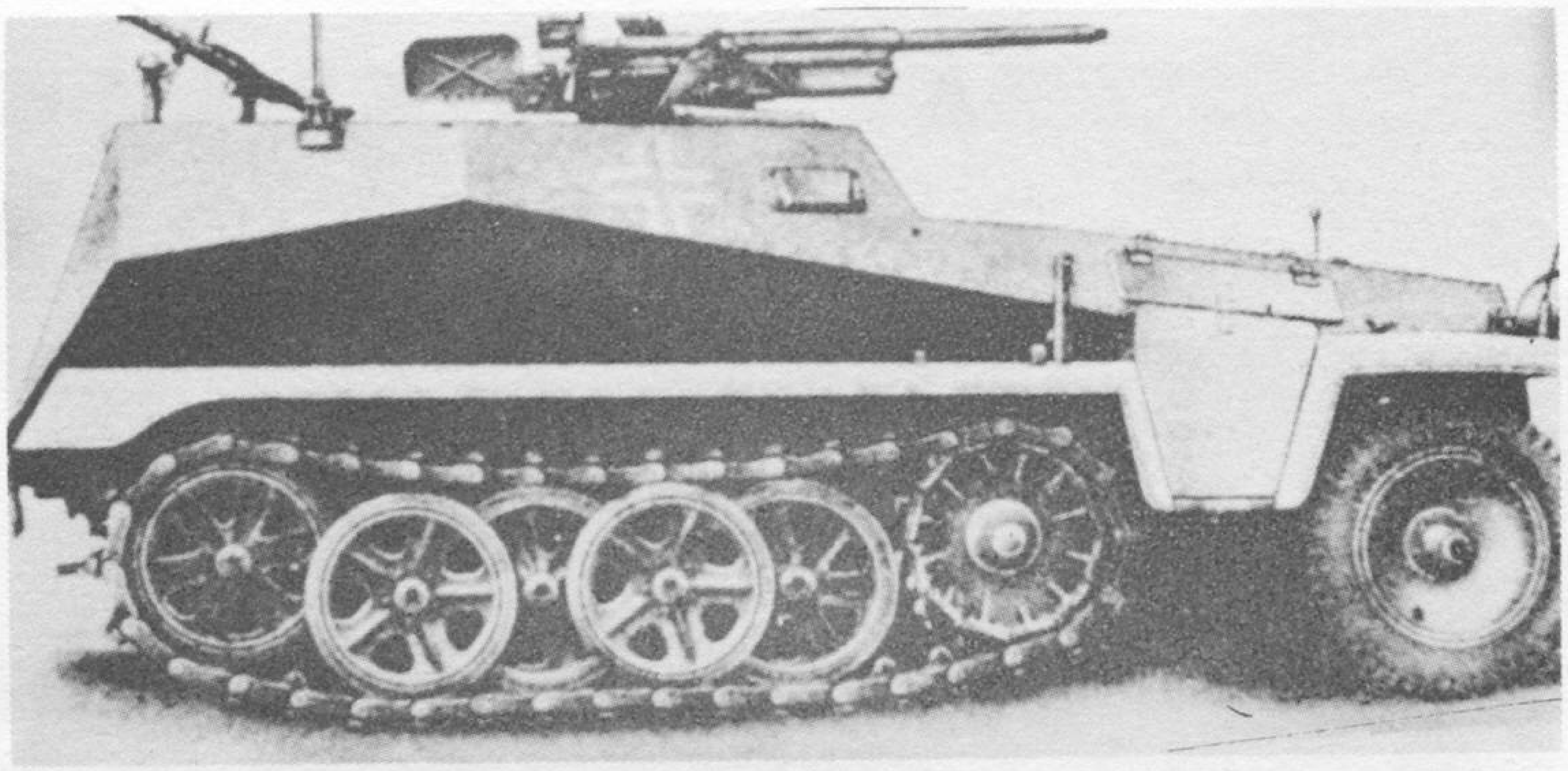


33

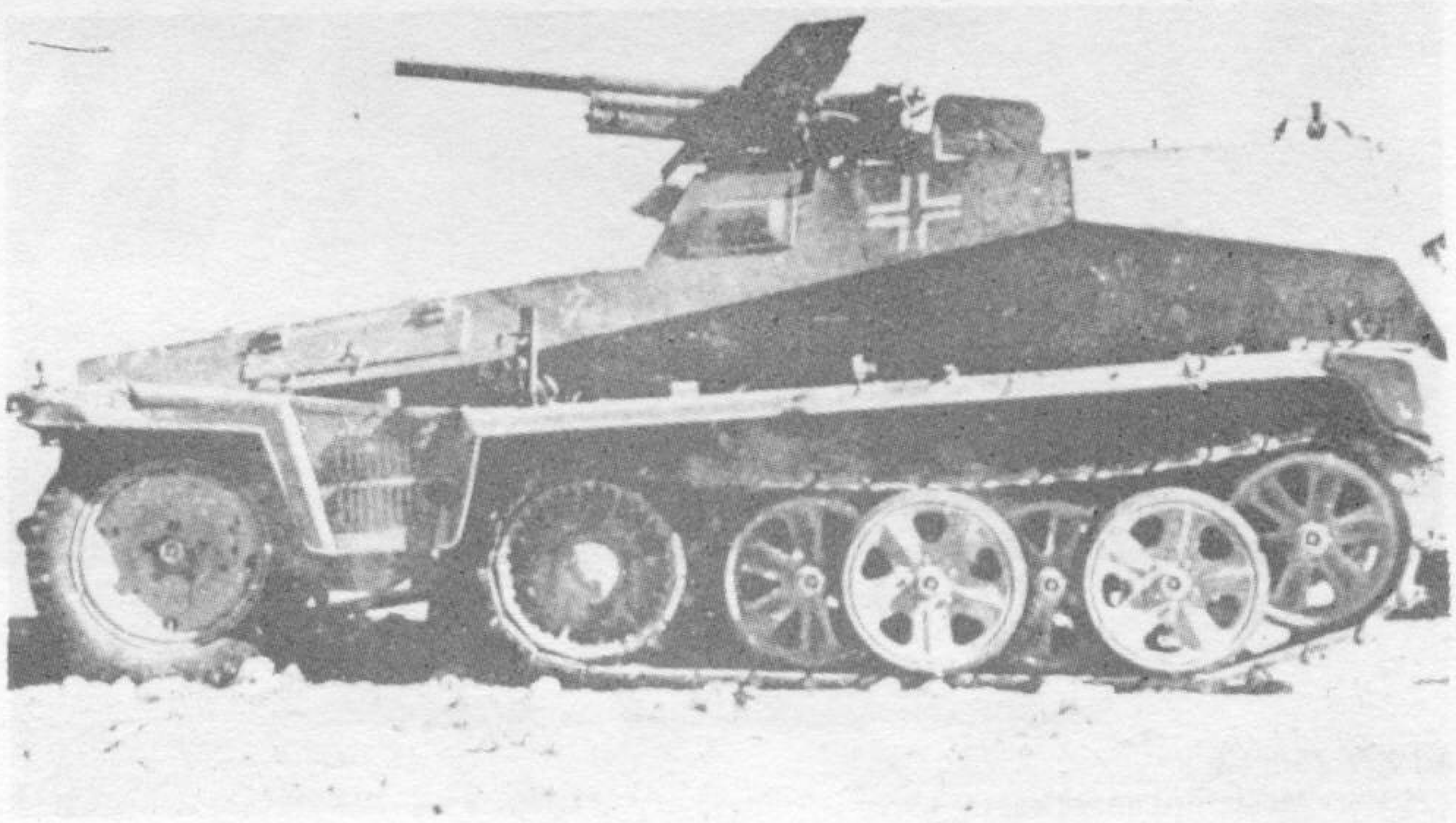


Sd Kfz 250/10.
Leichter Schetpanzerwagen (3.7 cm PAK)
Crew: 4
Weight: 5.67 tonnes.
Armament: 1 x 3.7 cm PAK 35/36 1 x MG 34.2 x MP 38

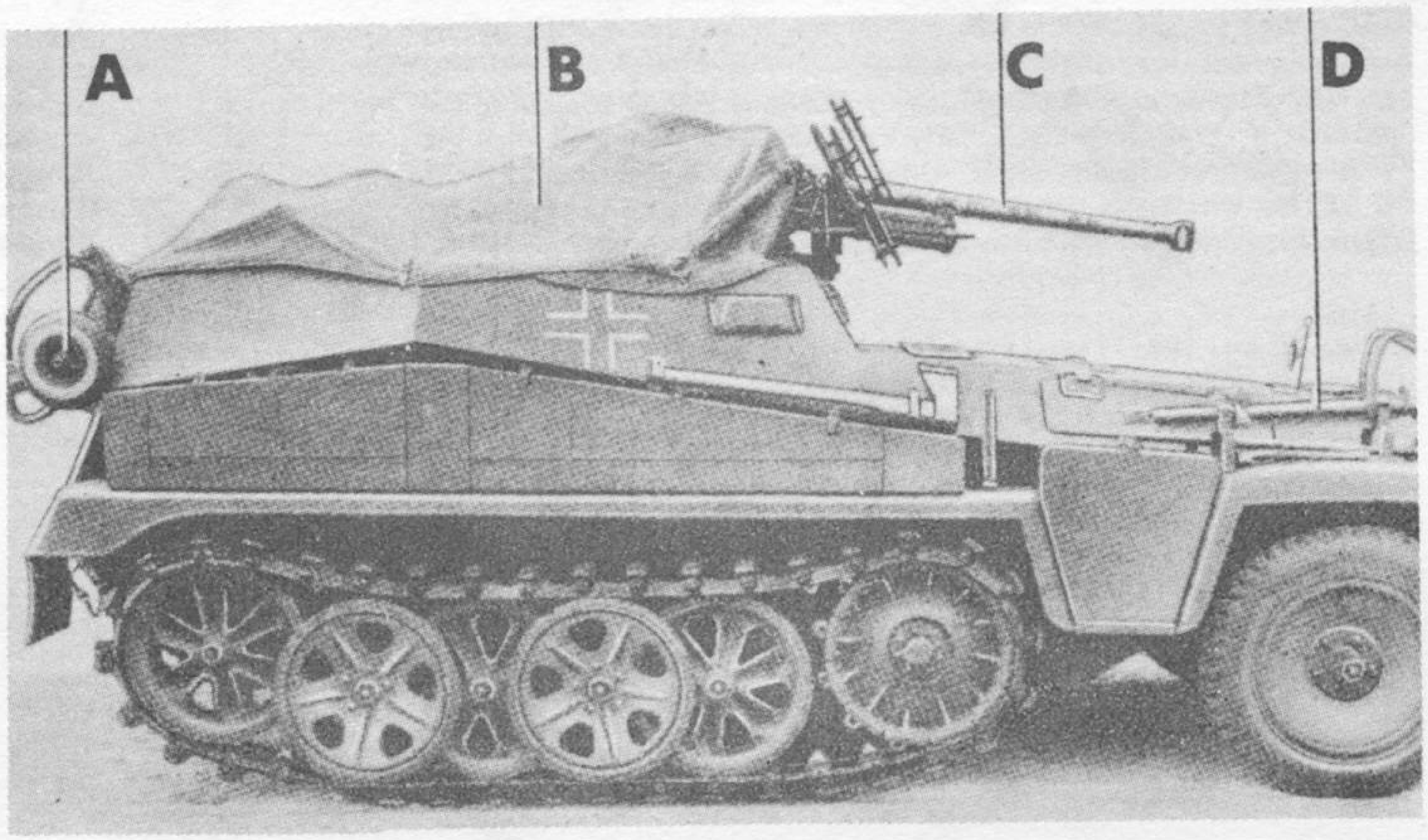
As early as the French campaign of 1940 the 3.7 cm Anti-tank gun was being mounted in these semi-tracked vehicles. This unit was the official vehicle of the Platoon Leader, so that he might give supporting fire during an attack. Several variations existed as regards the gun shield–some guns never had these fitted, others had only a half one to protect the sights and finally there were those that had the complete gun and shield similar to the field version. These units were never very effective due to the inadequacy of the 3.7 cm gun and were replaced firstly by the Sd Kfz 250/11 (2.8 cm) and eventually by the 7.5 cm KwK armed Sd Kfz 250/9 vehicles.

Photo 33: Unit with small gun shield. Photo 34: MH 6107: Unit with full standard gun shield destroyed in North Africa.

34



35



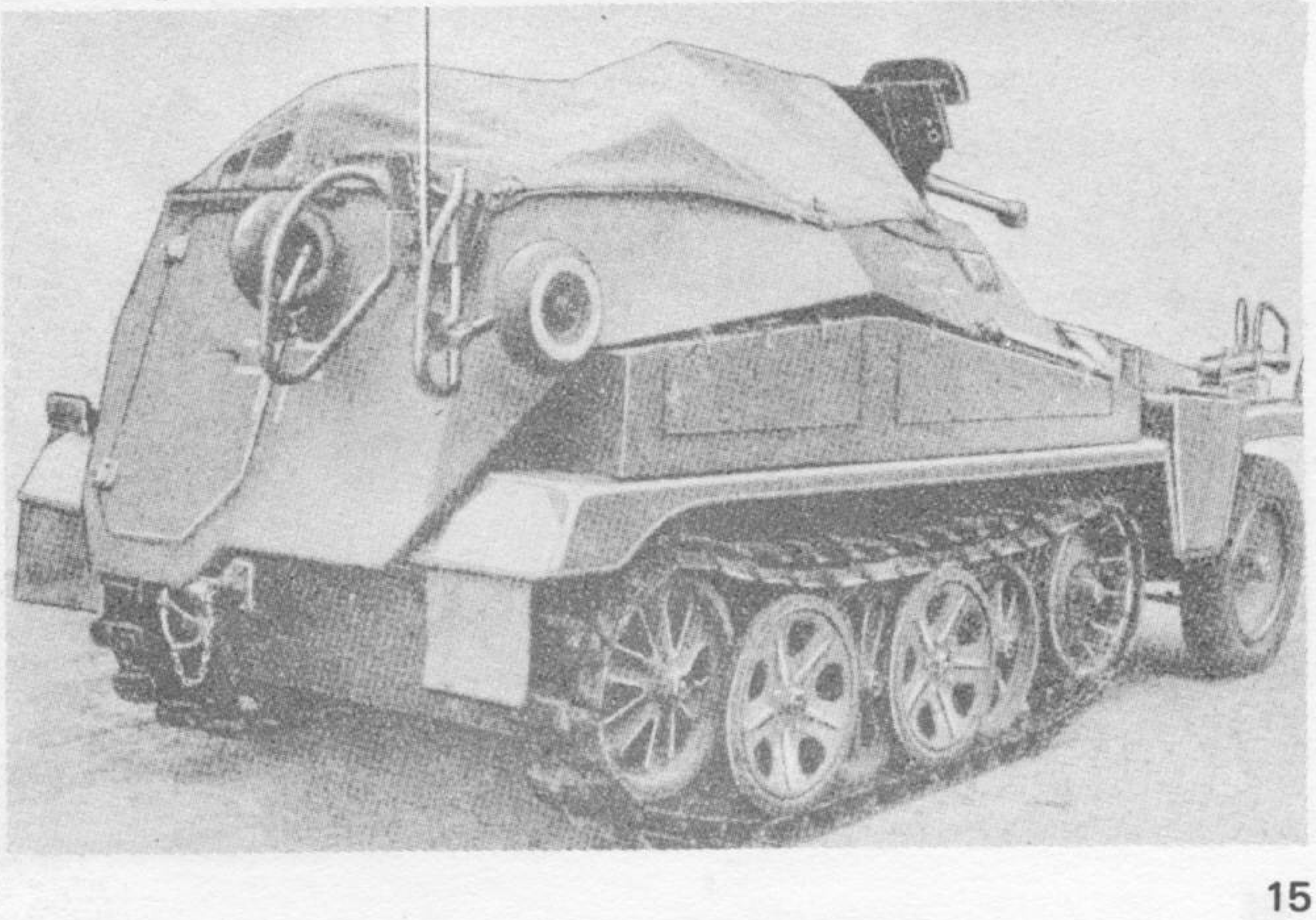
Sd Kfz 250/11
Leichter Schuetzenpanzerwagen (Schwere Panzerbuechse 41)
Crew: 4
Weight: 5.53 tonnes.
Armament: 1 x 2.8 cm s.Pz.B.41, 1 x MG 34, 2 x MP 38, 3 x KAR 98K.

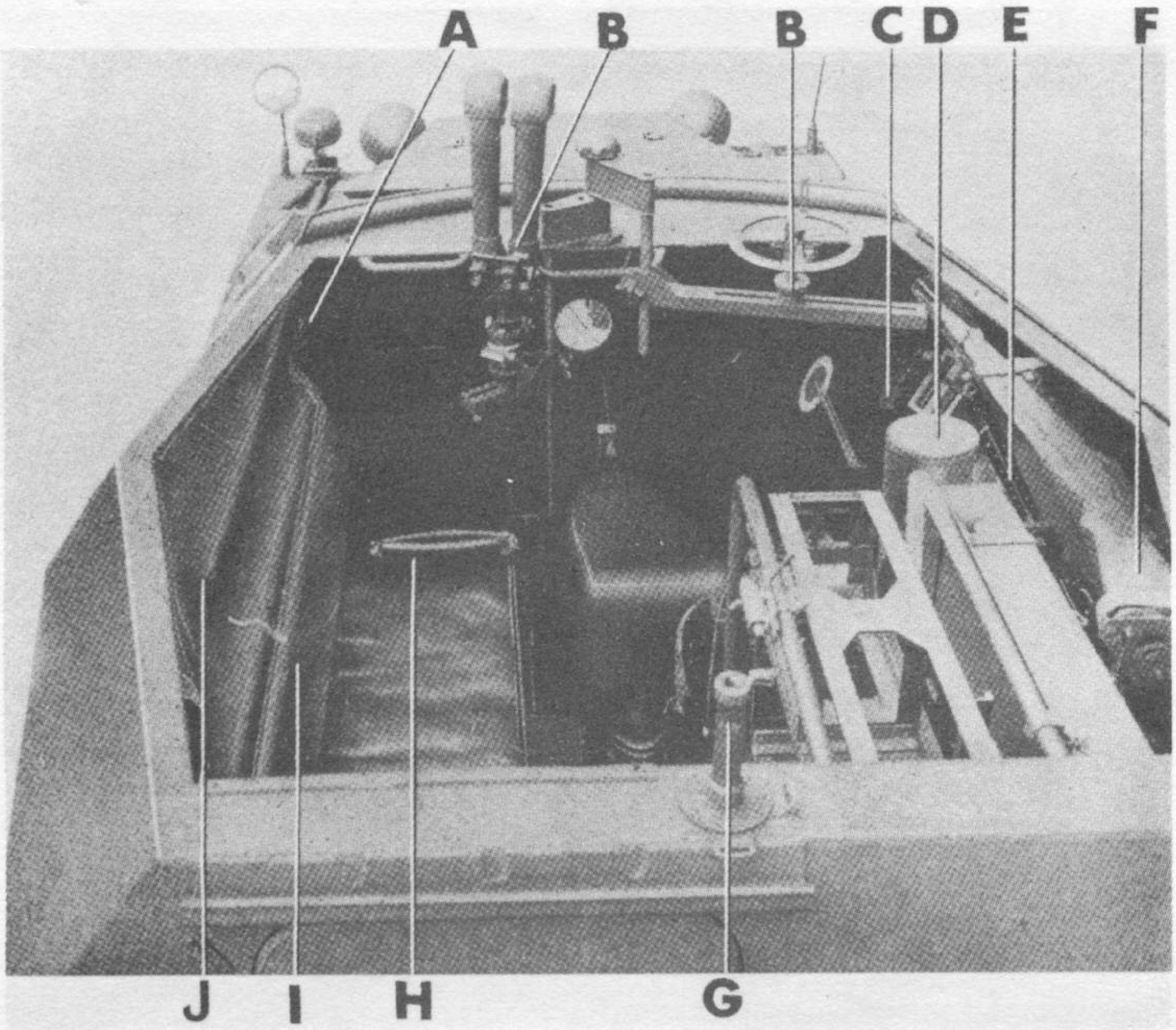
Adopted to fulfil a similar role as the Sd Kfz 250/10, this vehicle carried the heavy tapered bore anti-tank "rifle" 41. This weapon was however, dismountable and for this purpose the field carriage (Airborne) was carried. Parts being stowed as follows:

A Wheel section of field carriage for 2.8 cm S.Pz B 41.
B Tarpaulin cover fitted.
C 2.8 cm Schwere Panzerbuechse 41.
D Trail portion of carriage.

Photo 35: MH 10085. Photo 36: MH 10086.

36





37

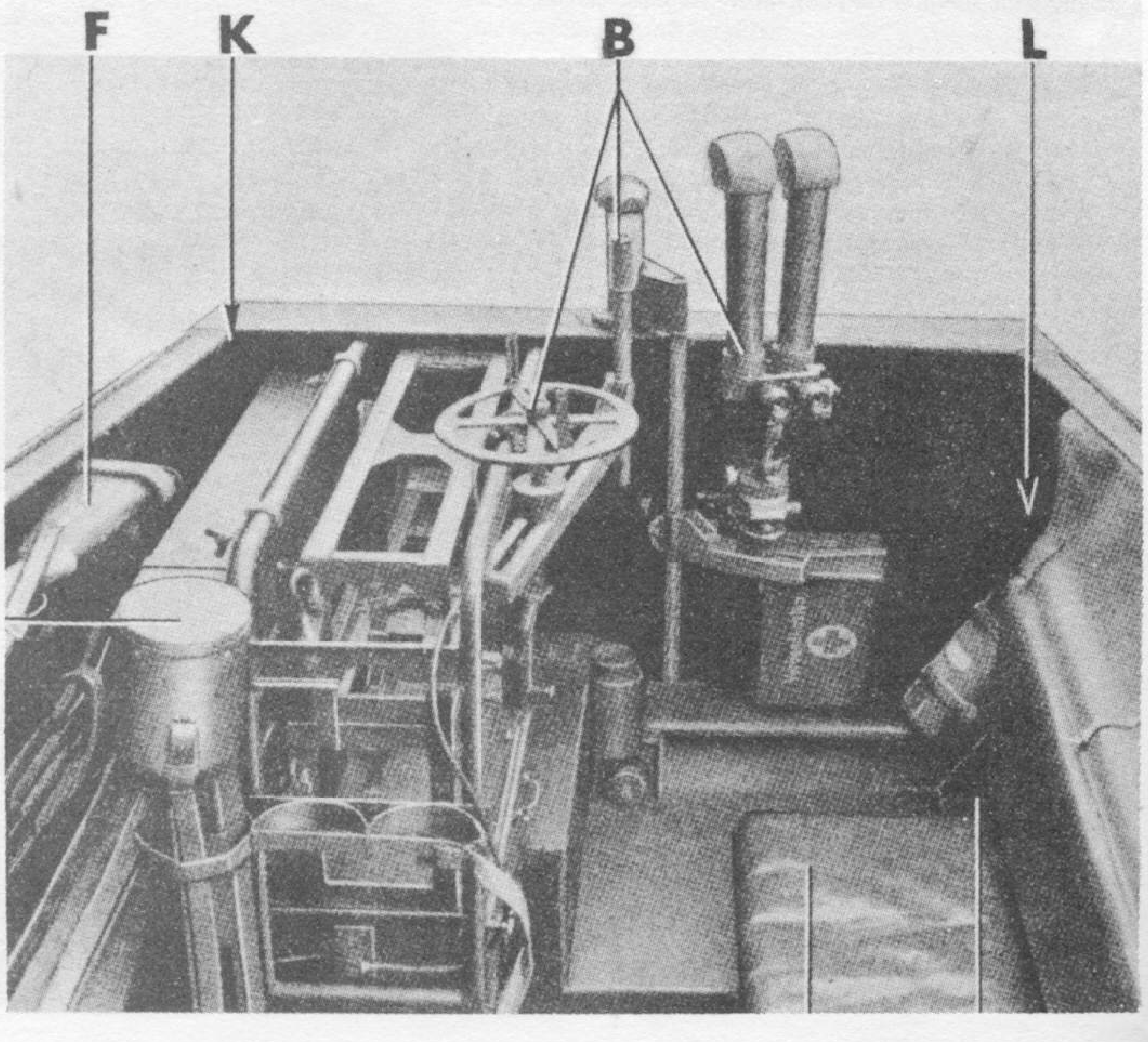
Sd Kfz 250/12.
Leichter Messtruppanzerwagen.
Crew 4:
Weight: 5.37 tonnes.
Armament: 1 x MG 34 or 42, 1 x MP 38,

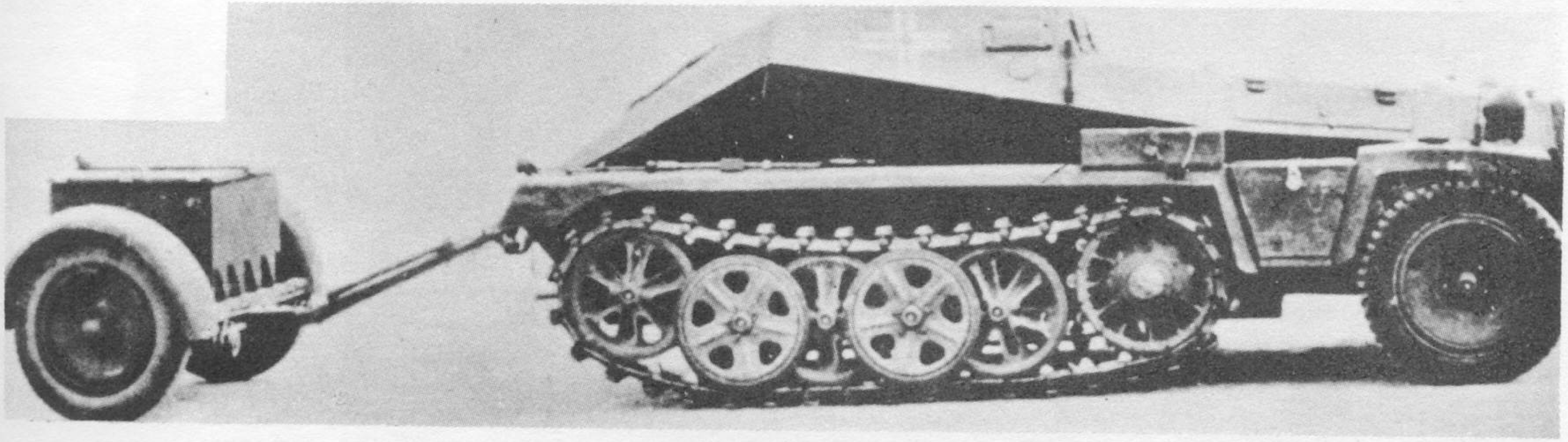
This was a light range finding (Survey Section) vehicle for use in co-operation with artillery units. Early examples were equipped with the FU 8 wireless and frame aerial, while later this was replaced with the FU 12. No wireless is fitted on the racks of the vehicle in the photographs. Fittings and equipment are as follows:

(Photo 37: MH 10131: Looking forwards).
(Photo 38: MH 10130: looking rearwards).

A	Gas Mask.
B	Scissors periscope and direction finder on special mounting.
C	1 x MP 38 and ammunition.
D	Tripod field mounting for dismounted use of periscope and direction finder.
E	Stowed MG 34.
F	4 x Kar 98K rifles.
G	Pivot for AA MG 34 mount and armoured shield or for Survey equipment
H	Tarpaulin – opening section
I	Cover Hoops.
J	Baggage contained with usual items stowed.
K	Tarpaulin, Verey pistol and ammunition.
L	Spent ammunition sack and belt drum holder.

38





39

Photo 39: H 4113. Shows the basic Sd Kfz 252 vehicle. Note the superstructure had to be cut away to keep the weight within the limitations of the capacity of the chassis. It must be remembered that these special vehicles had a heavier armour basis than the normal Sd Kfz 250.

Sd Kfz 252.
Leichter gepanzerter Munitionstransportkraftwagen.
Crew: 2.
Weight: 5.72 tonnes.

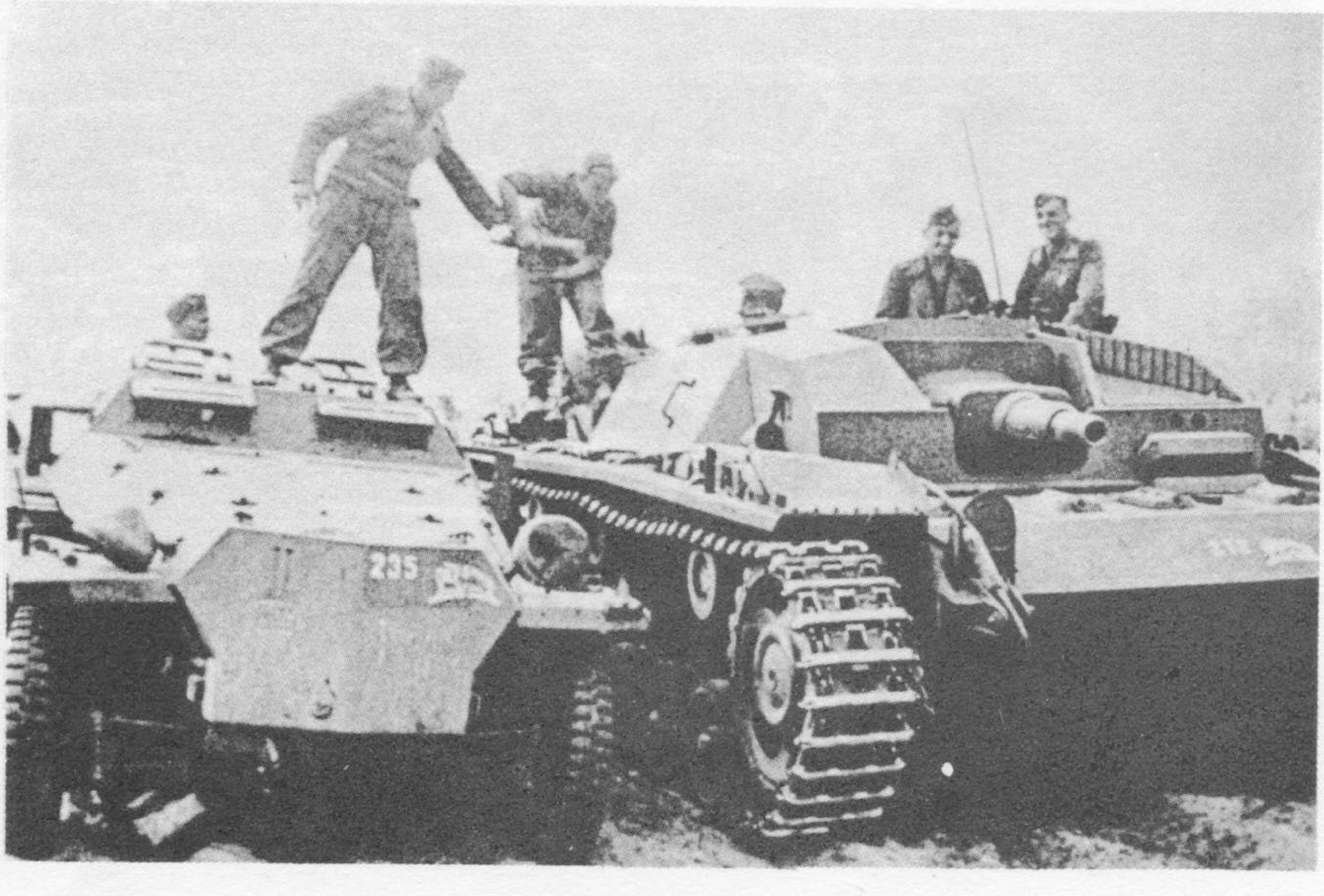
This Ammunition Carrier was designed when the Sd Kfz 250 series and was first envisaged to accompany the new Sturmgeschuetze. The superstructure was fully enclosed with overhead hatches for both the driver and commander – access could also be gained through the large double doors of the ammunition compartment at the rear. In addition to the 7.5cm Ammunition carried internally these units were normally issued with an ammunition trailer.

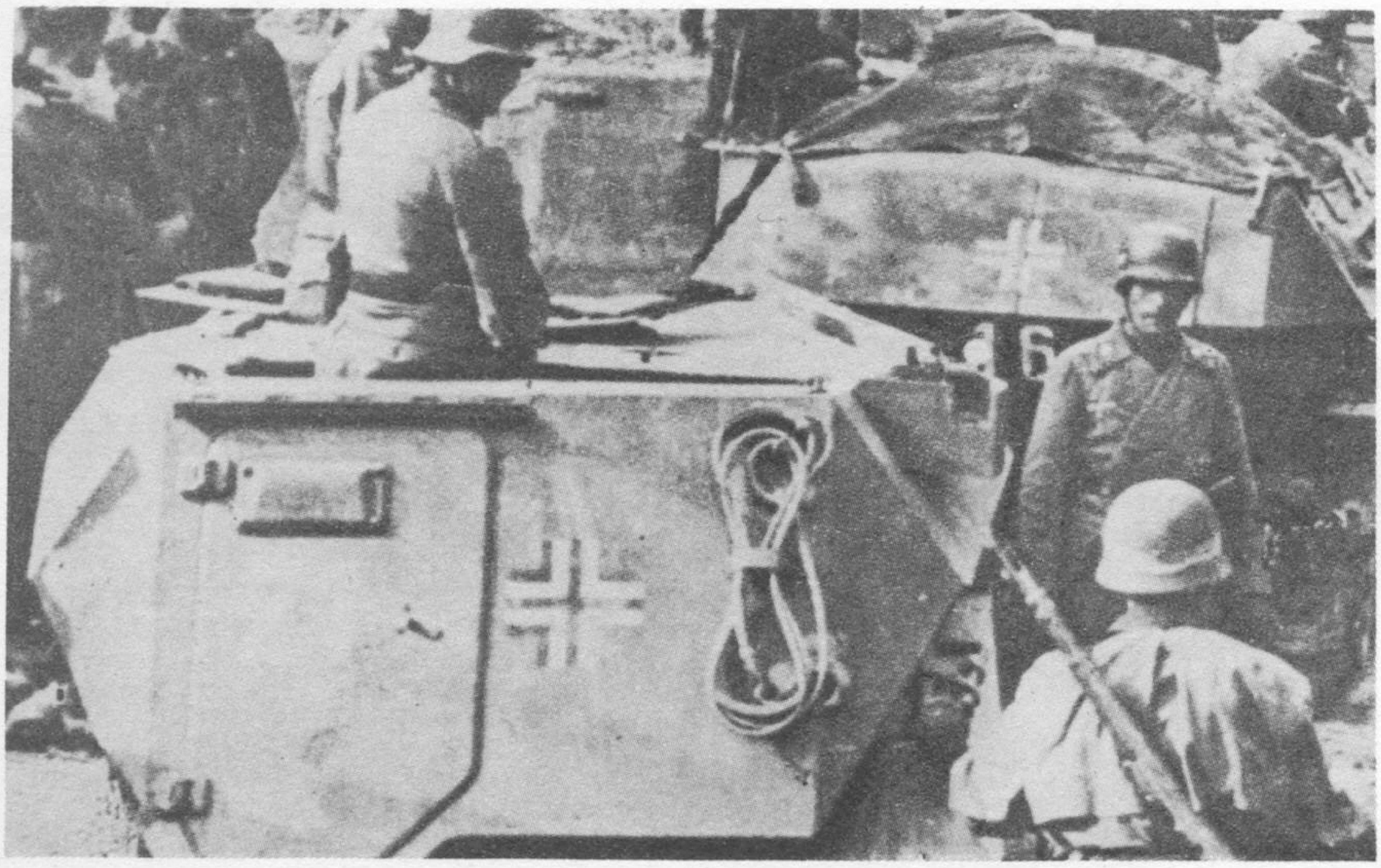
The chassis were supplied by the parent company of Demag, while the final assembly of the superstructure was undertaken by Wegmann.

After only a small number were completed it became obvious that the task of carrying ammunition could be adequately achieved by the minor modification of the standard Sd Ktz 250 vehicle. This led to production of the Sd Ktz 250/6 Ausf A. described.

Photo 40:
Axel Duckert Collection. Shows an early version of the Sturmegeschuetz being reloaded with ammunition, for its 7.5cm Stu. K, from one of these special Munitionstransportkraftwagen.

40





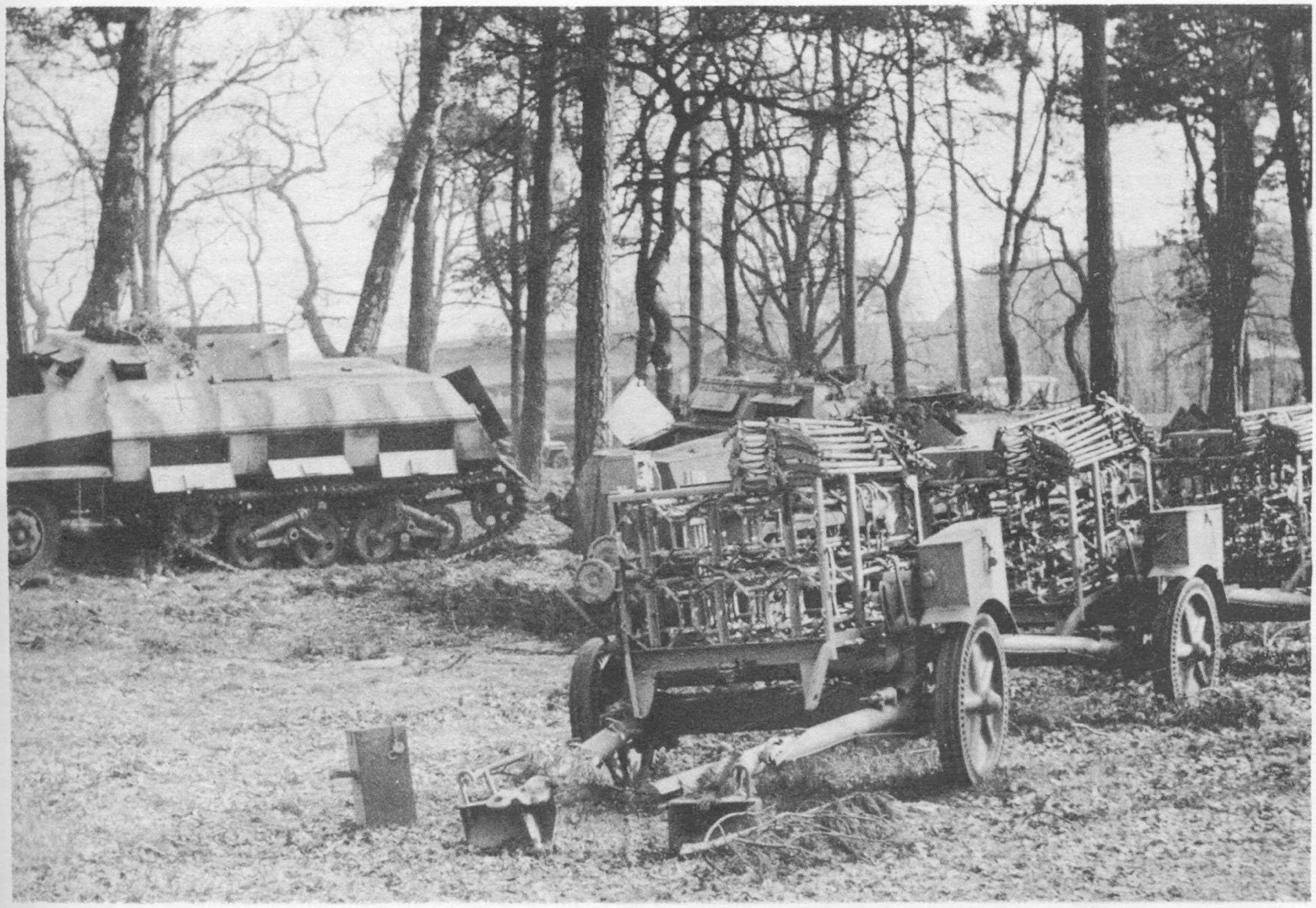
41

1940/41. Sd Kfz 253.
Leichter Gerpanzerter Beobachtungskraftwagen.
Crew: 4.
Weight: 5.7 tonnes.

During the original planning for Mechanised Infantry formations, the equipment was to consist of the Sturmgeschuetze as the Assault Vehicle while the Infantry were to be carried in semi-tracked vehicles. To standardise on this set up, it was decided to design the ammunition carrier and observation vehicles needed for the Assault Gun formations on the chassis of one of the semi-tracked vehicles. This resulted in the Sd Kfz 252 and 253 vehicles.

Like the Sd Kfz 252 this vehicle had a fully enclosed fighting compartment with access through roof hatches and rear door. Frontal plates were 18mm as opposed to the 14.5mm of the normal Sd Kfz 250. Radio equipment was suited to the Assault guns, with the FU 15 Ultra shortwave receiver h and FU 16 10 watt transmitter h all operating on the 23000-24950 Kc/s Band.
(Photo 41: Photo 42).

42

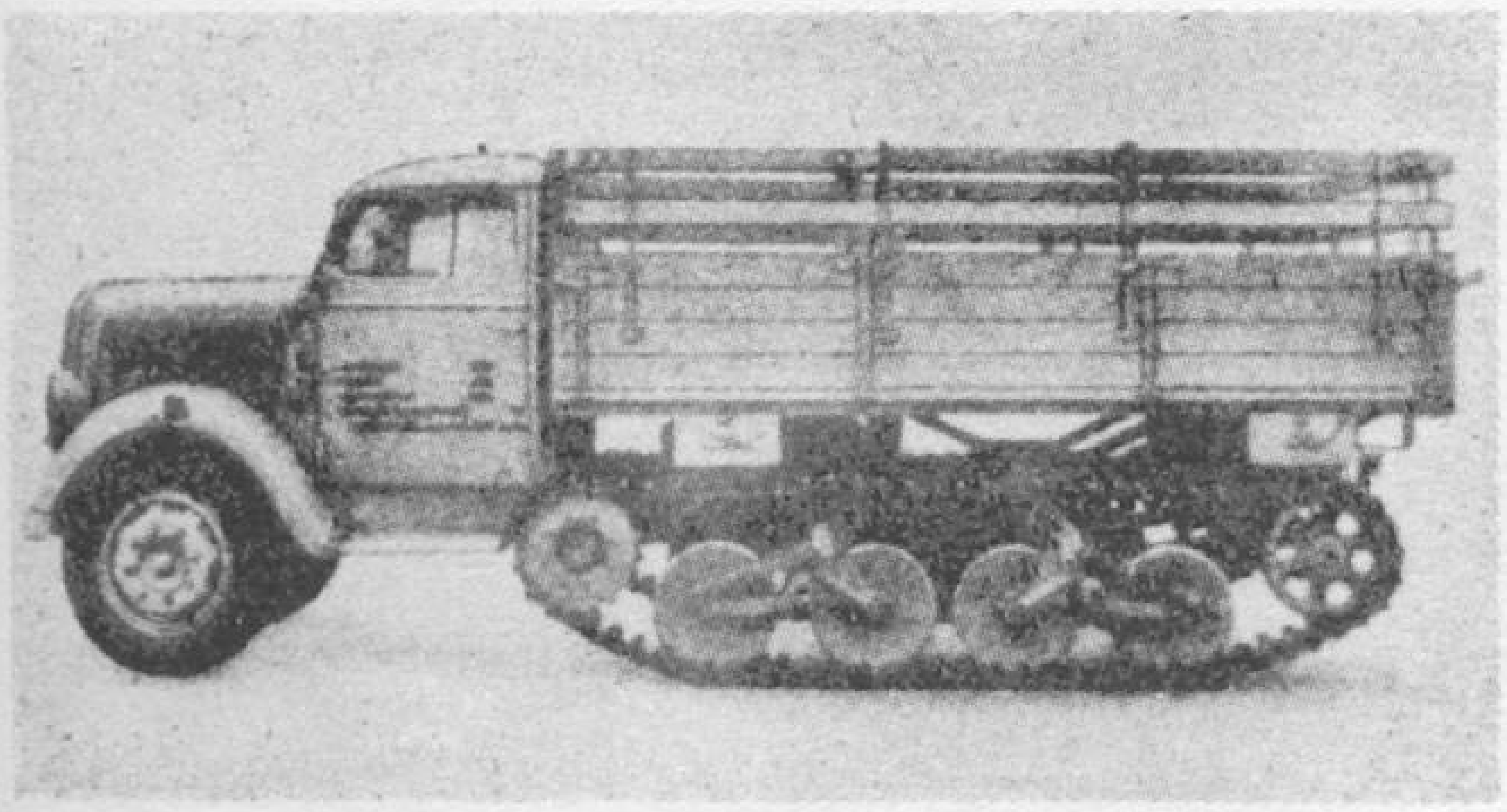


44

(Photo 44: BU 3430. Interesting picture of an Munitionspanzer, and the three heavy Nebelwerfers it towed, abandoned during April 1945 near Oelle).

(Photo 43: Basic 'Maultier' truck.

43

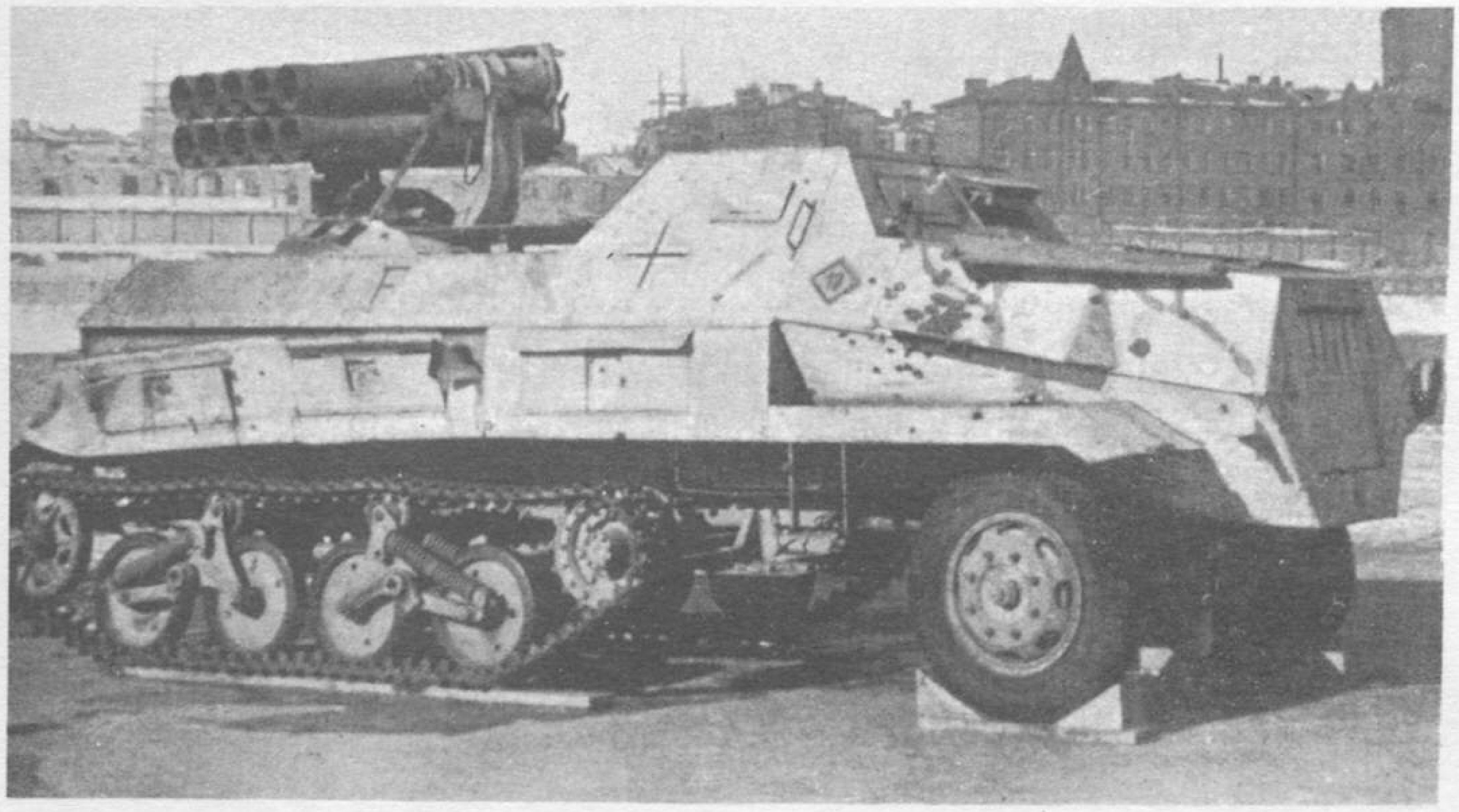


1944.
Munitionspanzer 'Maultier' (Opel).
Opel 3.6–36 Type S/SSM.

As more use was made of the multiple rocket projectors (Nebelwerfer), the need arose for a suitable lightly armoured ammunition vehicle with adequte cross country performance, to act both as a tractor and as a self-propelled carriage.

The Schuetzerpanzerwagen were in too much demand as were artillery tractor chassis, so it was decided to design an armoured superstructure for the Opel semi-tracked truck. This vehicle was introduced in early 1943 to negotiate the diffcult terrain encountered when supplying front line areas in Russia (See Bellona Prints Series 14).

The order for 3000 such vehicles was placed through Opel, along with a similar number of the self-propelled carriages described on page 20.



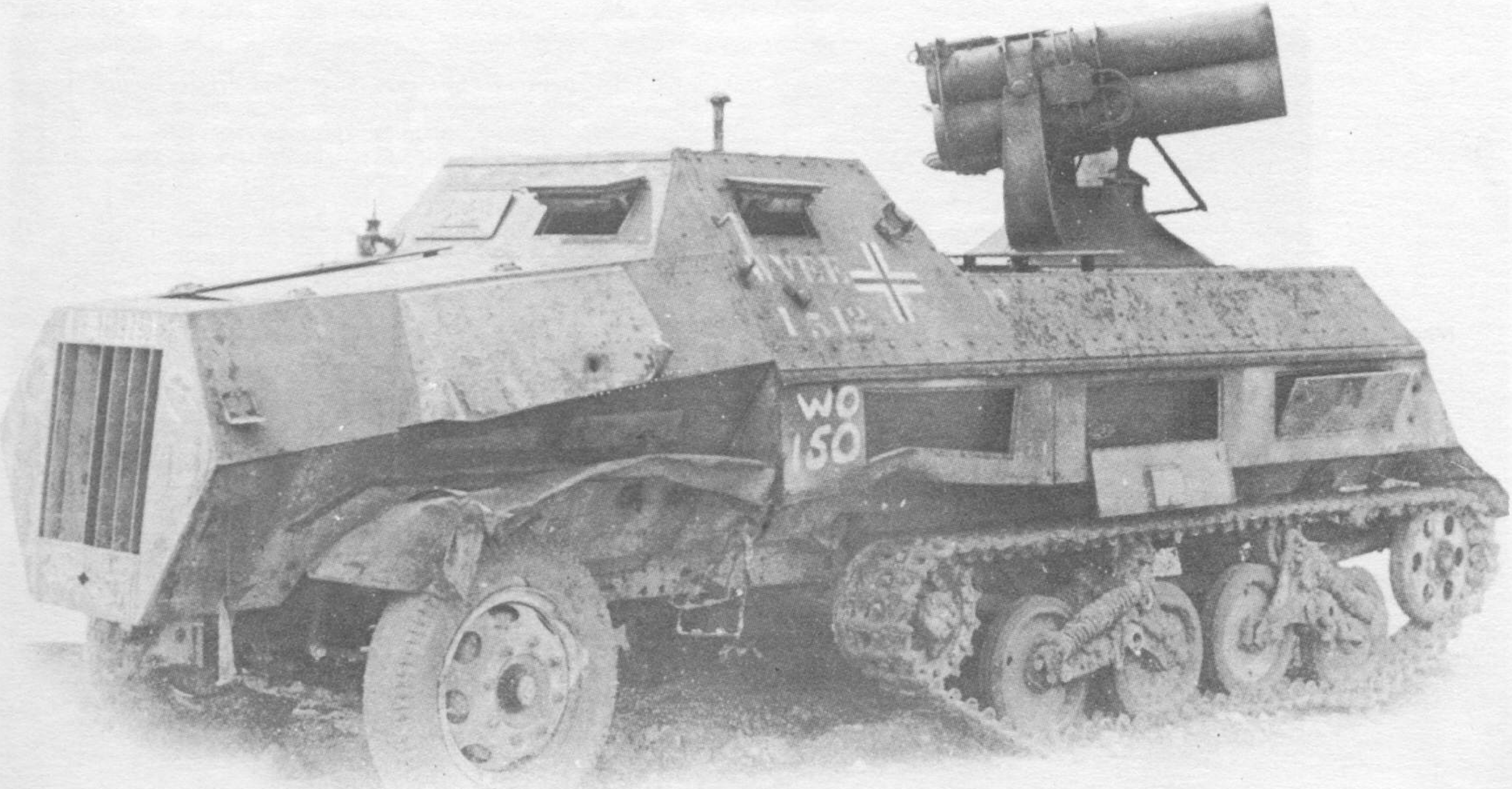
45

1944. Sd Kfz 4/1.
15cm Panzerwerfer 42 auf 'Maultier' (Opel).
Opel 3.6-36 Type S/SSM.
Crew: 3.
Weight: 7.1 tonnes.
Length' 19ft 8in (600cm).
Width: 7ft. 3in (220cm).
Height: 8ft 6in (250cm).
Speed: 30mph (38Kmph).
Engine: 3.6 litre petrol 6 cyl.

The Nebelwerfer rocket projector had been developed as a short range high density artillery weapon which was simple and cheap to manufacture. Due to their short range, increased mobility was called for when these projectors were in action alongside mechanised formations.

Based on the Opel 'Maultier' described on page 19, this rocket projector vehicle was fitted with the ten barrelled Panzerwerfer 42. Normal armament of 1 x MG 42 was also carried with a pivot mounting similar to that seen on the Sd Kfz 250 vehicles. A total of 300 of these rocket carriers were ordered through Opel.
(Photo 45).
(Photo 46).

46



1943/44.
Leichter Schuctzenpanzerwagen U 304 (f).
Unic Kegresse P 107 p
Crew: 6.
Length: 15ft 11in (485cm).
Width: 5ft 11in (180cm).
Weight: Approx. 5 tonnes.
Speed: 28 mph (45 Kmph).
Radius of action: 217 miles (350Km).

Successful utilization of the artillery tractor version of this French vehicle prompted the manufacturer of an armoured superstructure for these vehicles (See Bellona Handbook No. 2, part I). These were used in place of the Sd Kfz 250 which was never available in sufficient numbers to the German troops in France. The armoured superstructure was based upon that of the Sd Kfz 250 produced until 1943. Like the Sd Kfz 250 vehicles late production versions appeared with simplified body work. Listed in US lists also as "Schuetzenpanzerwagen P 107(f)".

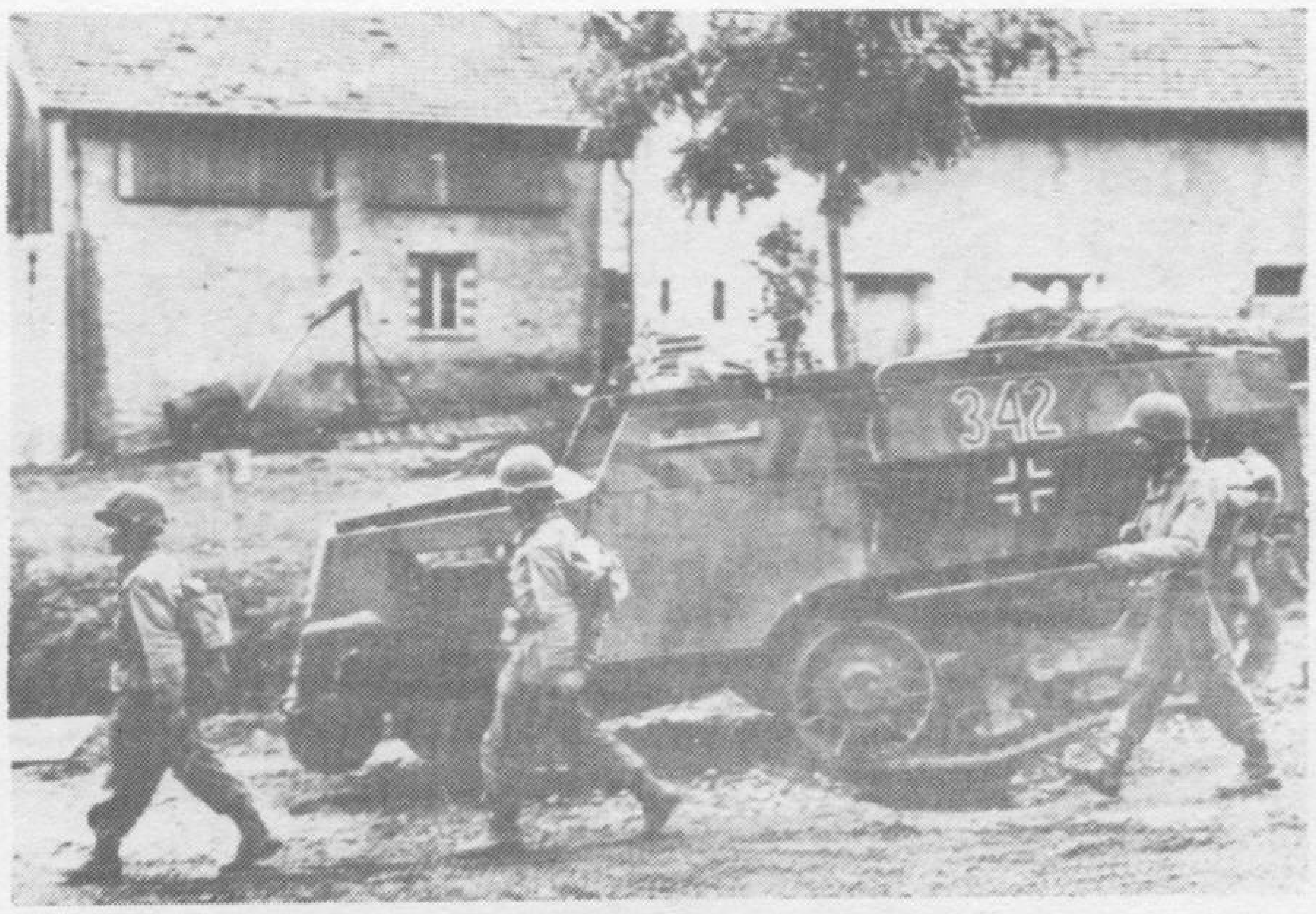
Photo 47: Leichter Krankenpanzerwagen U 304(f); An ambulance version of the Unic vehicle.

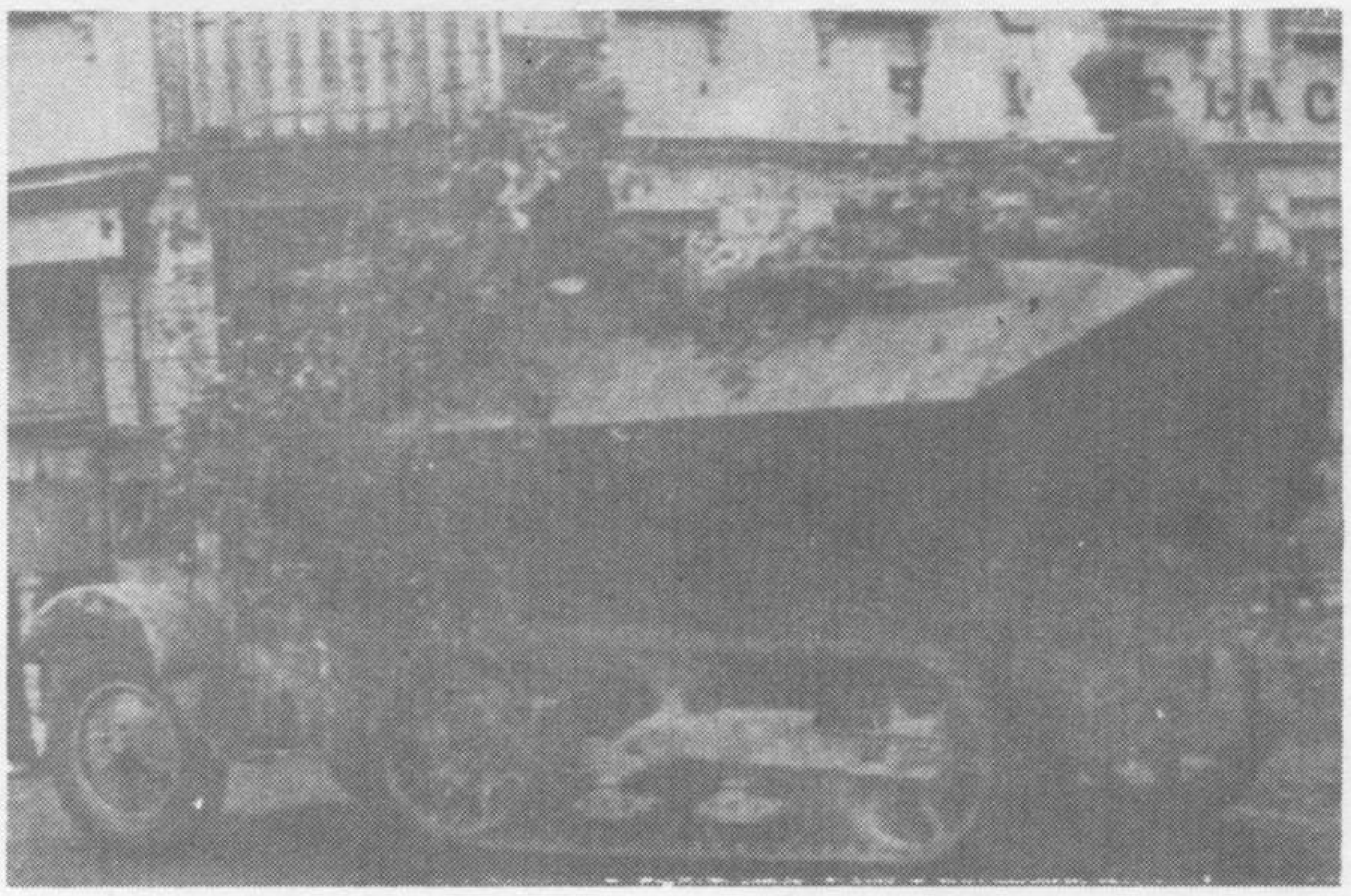
Photo 48: As can be seen the early versions retained the mudguards of the standard semi-track. The 4-cylinder petrol engine type "P39" of these vehicles developed 60 bhp.

Photo 49: Note the simplified superstructure of this late production model which was destroyed by a mine.

All these vehicles retained the forward roller, also seen on American semi-track vehicles. Its purpose was to assist in the negotiation of trenches and hollows.

49





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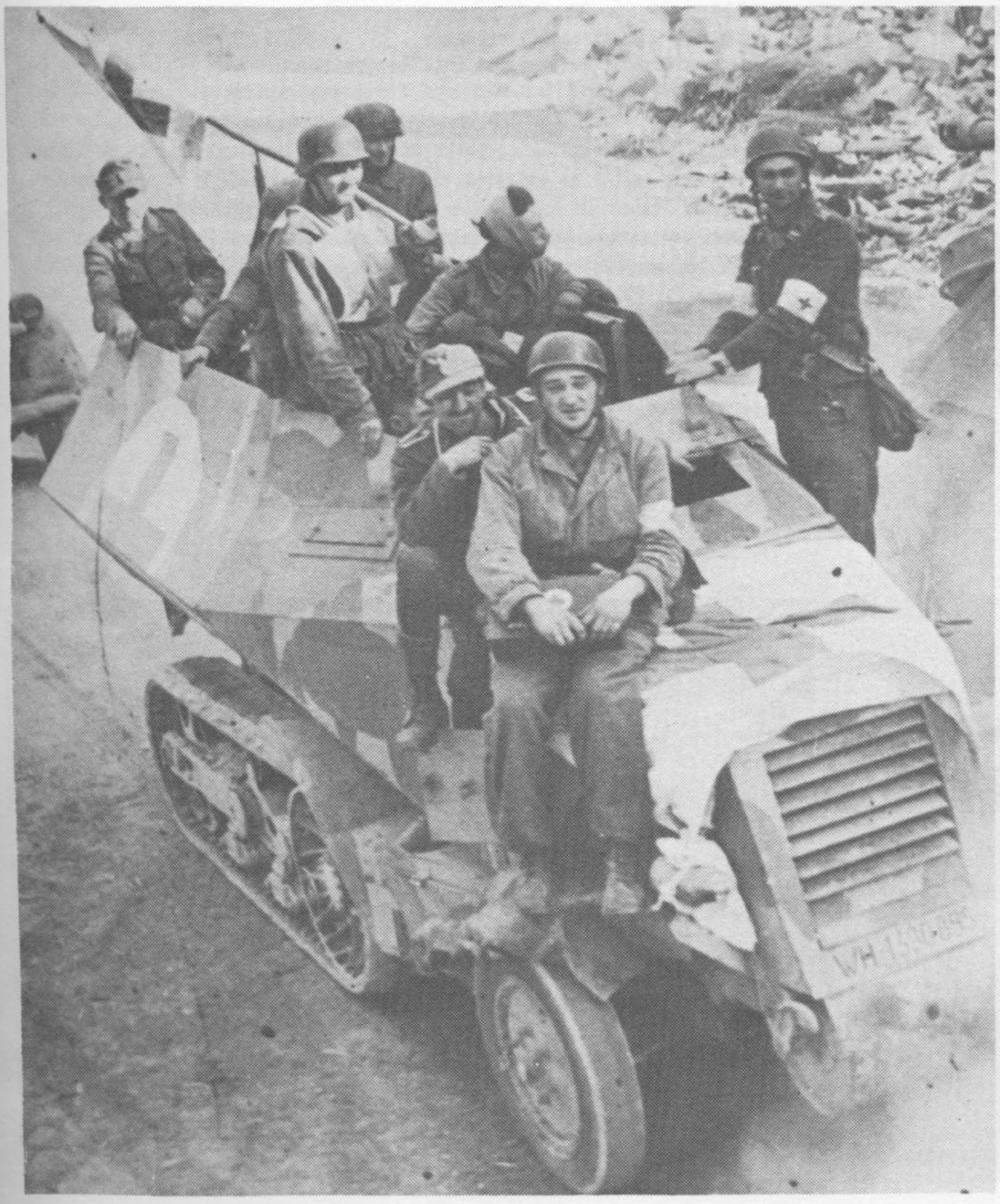
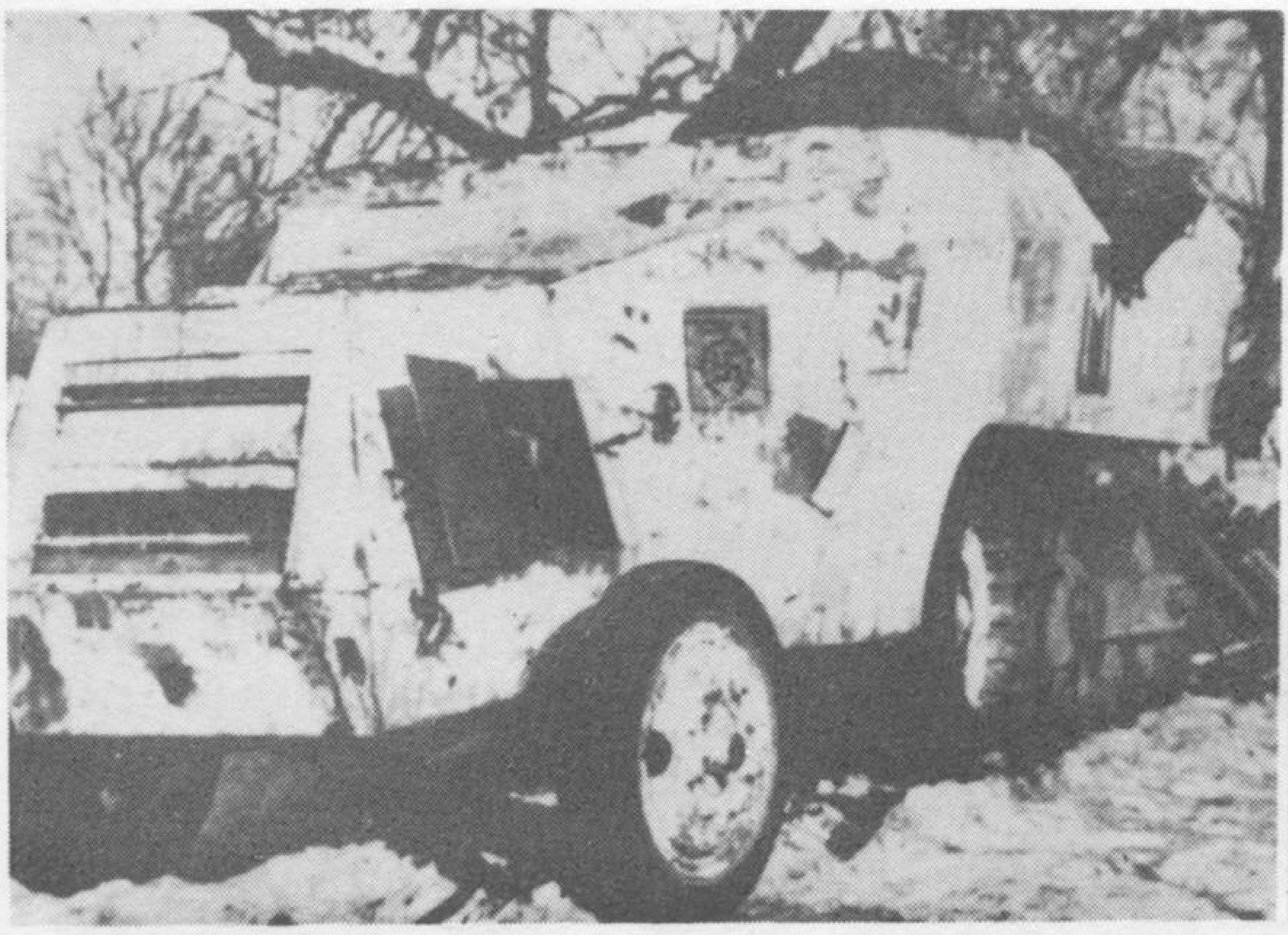
47





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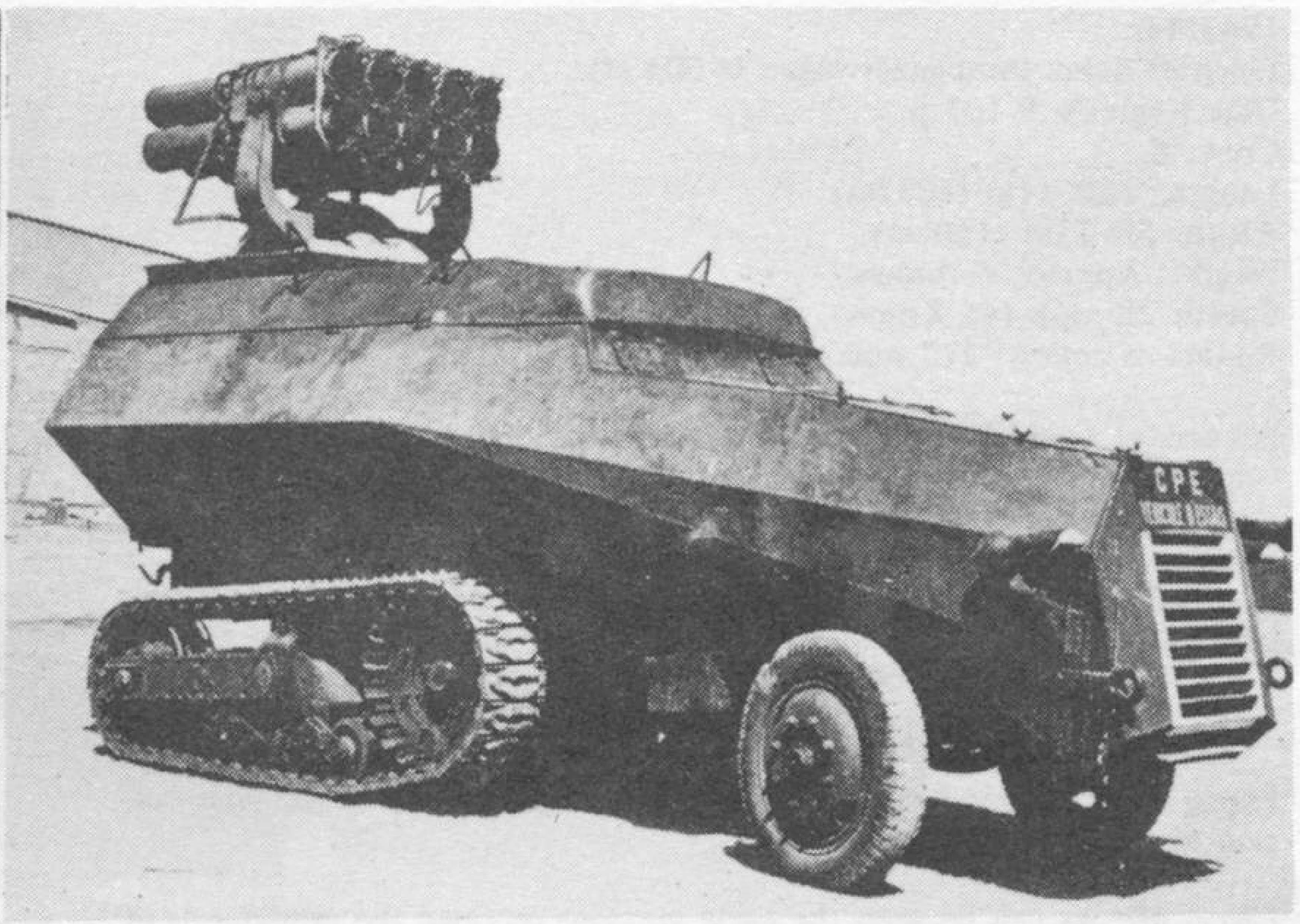


51

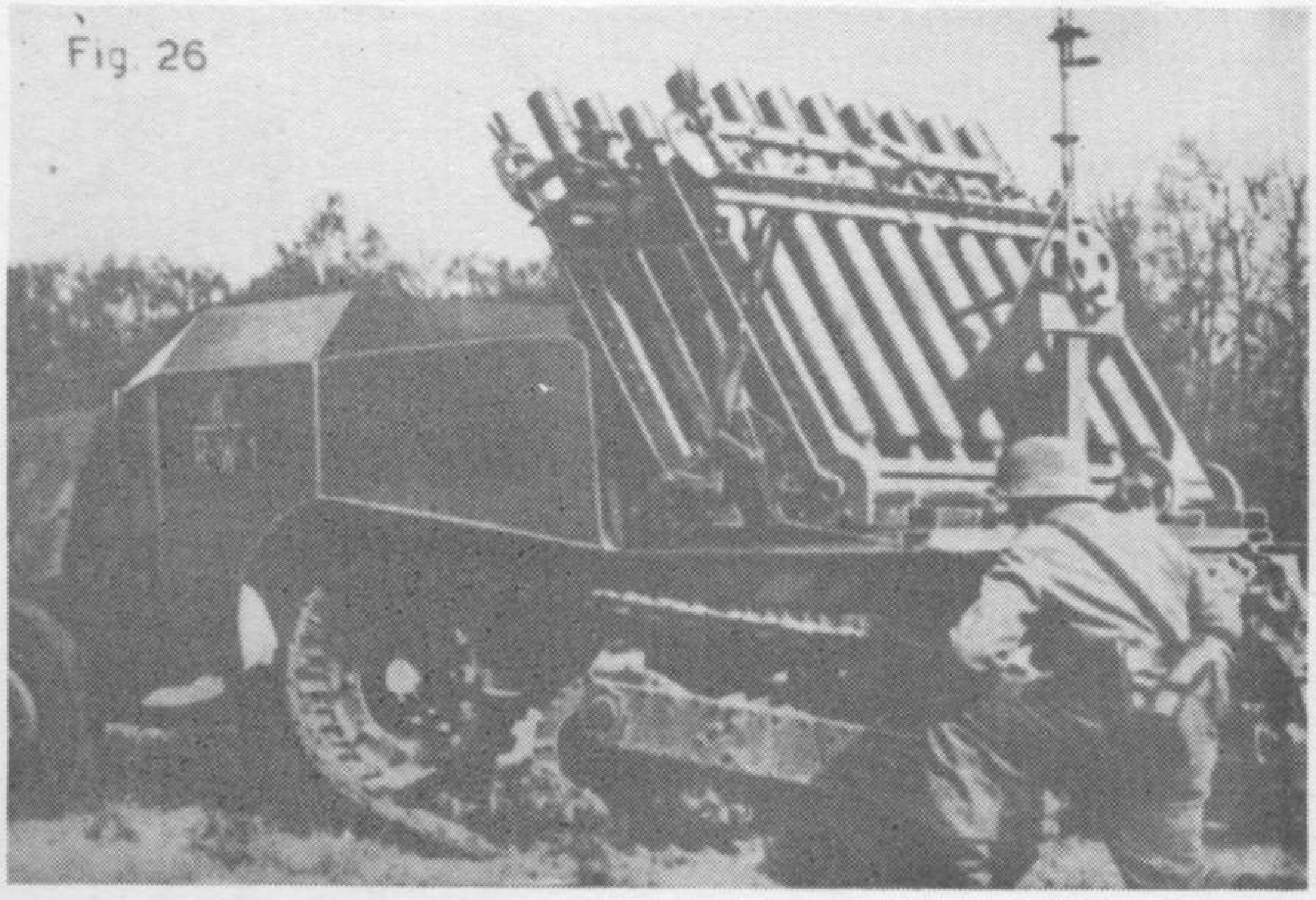
1943/44.
Mittlerer Schuetzenpanzerwagen S 307 (f).
Somua MCG p
Crew:
Weight: 7.3 tonnes.
Length: 18ft 11in (576cm).
Width: 6ft 10in (210cm).
Height: 6ft 8in (204cm).
Speed: 21mph (34Kmph).
Radius of action: 62 miles (100Km).
Engines: Somua 4-cylinder 60 bhp.

The Somua MCH artillery tractor was a slightly lighter version of the Somua MCL 6-ZgKw S 303 (f) described in part I. The MCG was extensively used as a prime mover by the Wehrmacht towing the 10.5cm Howitzers. In 1943 an armoured body was designed and fitted to some of these vehicles to augment the supplies of Sd Kfz 251 vehicles from Germany.
(Photo 50: Shows a standard armoured Personnel Carrier version of the S307 (f).

An interesting extension of the development of the armoured Somua carrier was undertaken by the French at the end of the War. Using the basic superstructure introduced by the Germans as a basis for a self-propelled rocket launcher. The Rocket equipment was the German Panzer wefer 42 similar to that mounted on the Opel "Maultier" vehicles.
(Photo 51: E. C. Armees).

1944.
Mittlerer Schuetzenpanzerwagen S 307 (f) mit Reihenwerfer.
The armament carried by this Somua vehicle was adapted from 16 captured French 81mm Mortars. These were mounted in two rows on a framework which had full traverse. The three outside mortars on each side of both rows could be deflected independently, while the whole mounting could be elevated from plus 40 to plus 85 degrees. Simultaneous fire of all 16 mortars was achieved by pre loading each with a bomb which was held at the top of the barrel. When the trigger was operated the bombs were released so as to fire in the normal manner.
(Photo 52. Photo 53: E. C. Armees).

52



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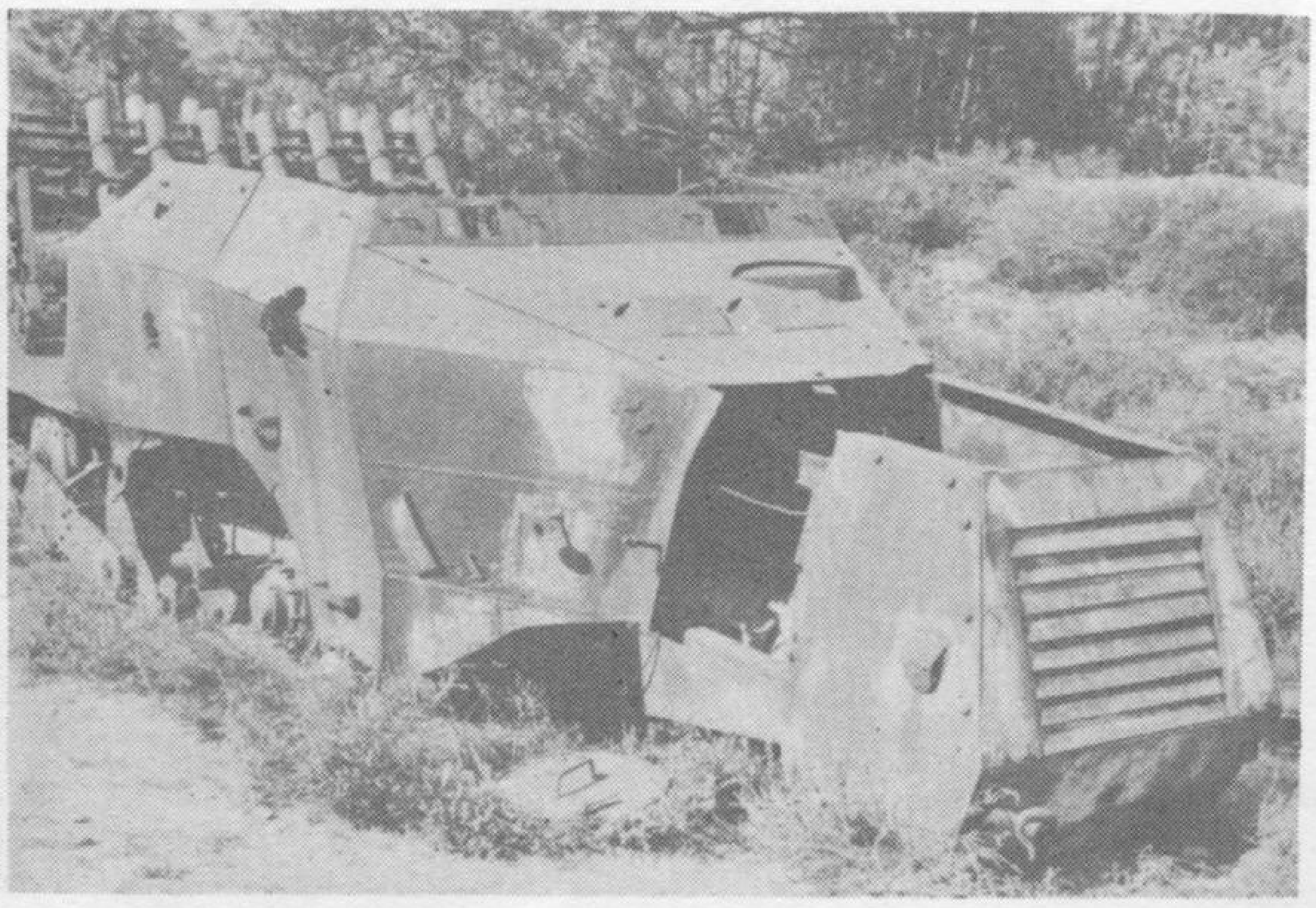
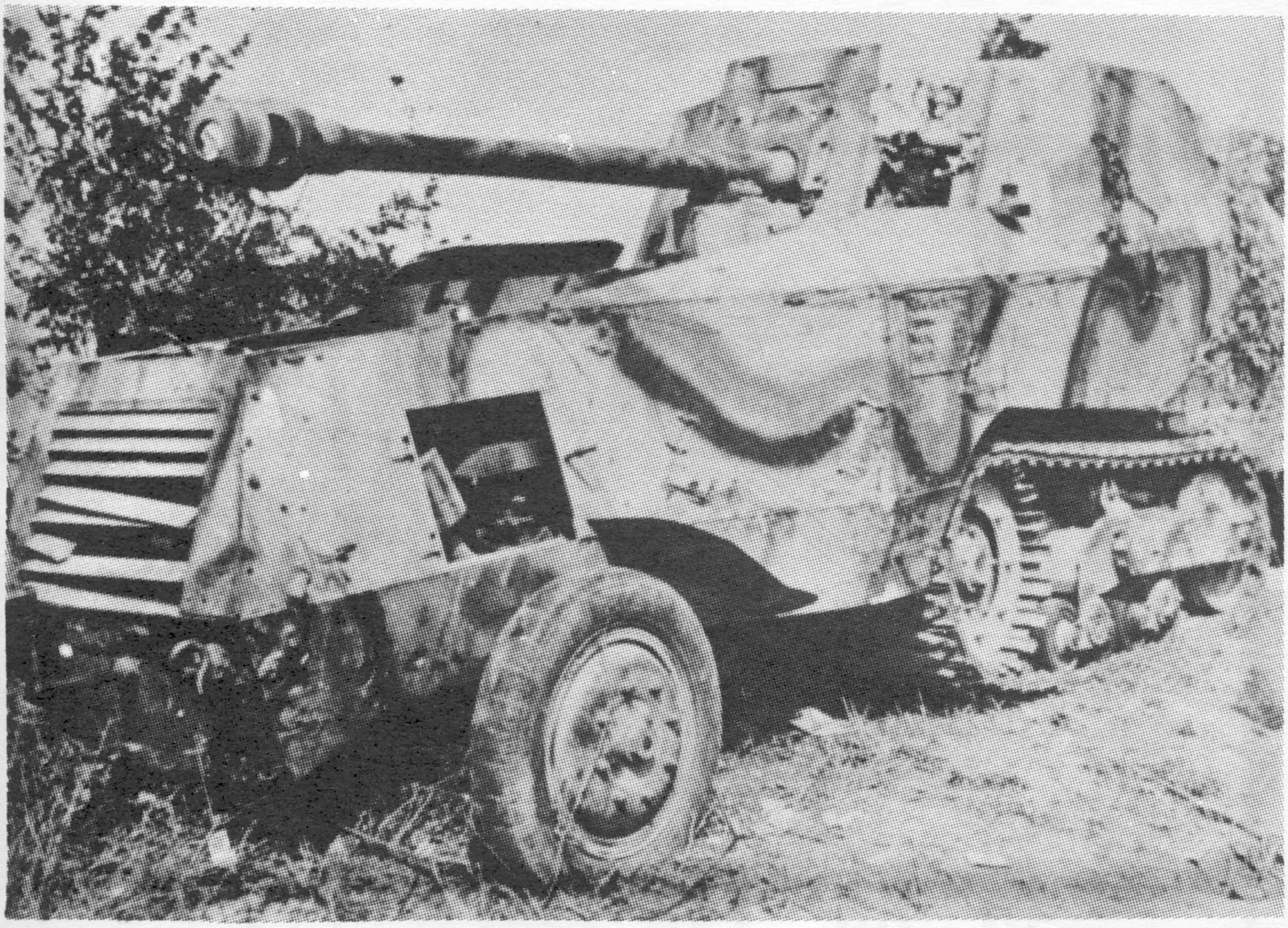




55

1944.
7.5cm PAK 40 L/46 auf Mittlerer Schuetzenpanzerwagen S 307 (f).
Crew: 3/4.
Weight: 8.5 tonnes approx.

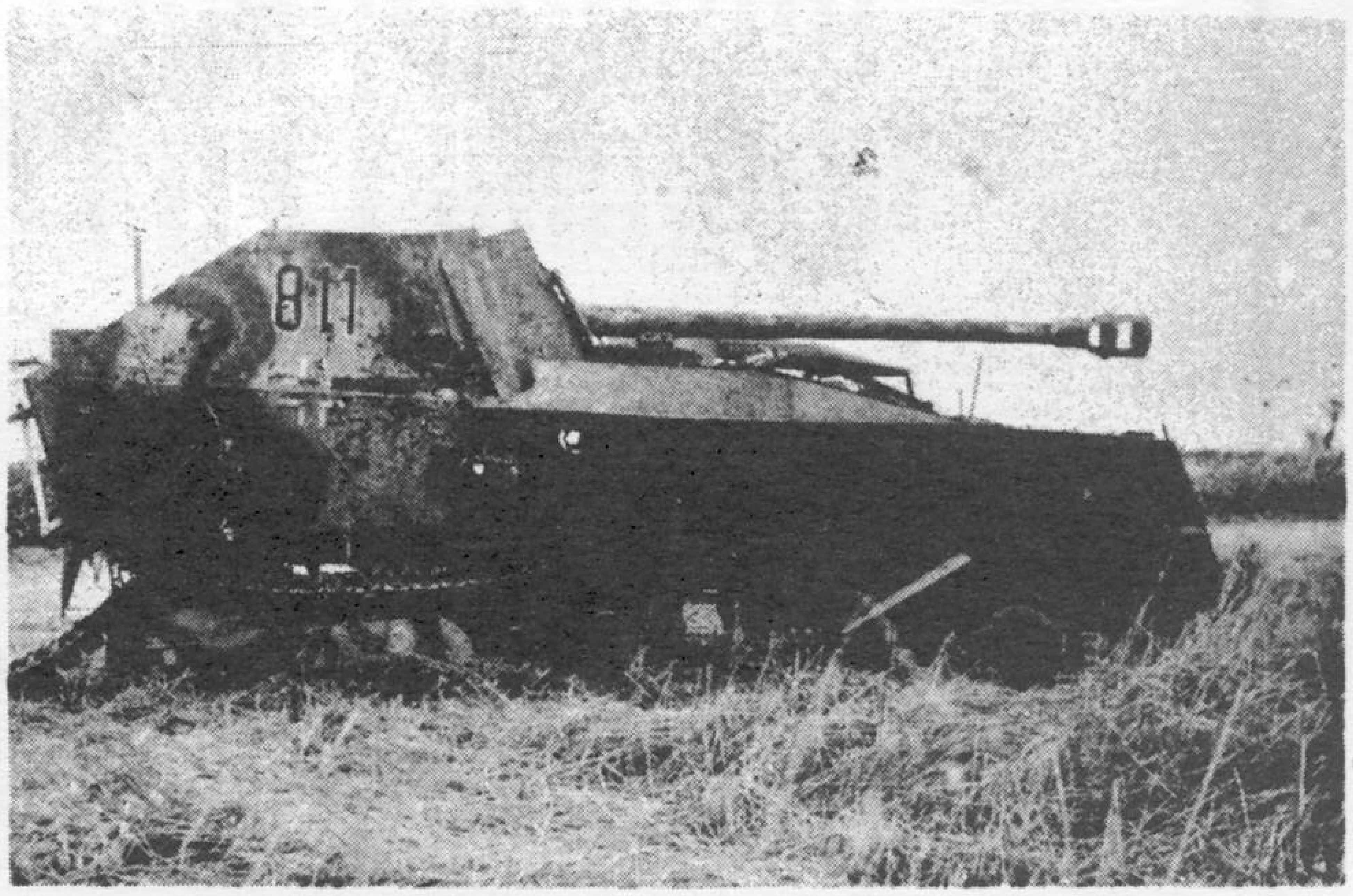
The shortage of tank destroyers available to the German Infantry operating in France during the period leading up to the Invasion in Mid 1944, led to the adoption of many varied chassis as gun carriages for this role. These chassis were for the most part old French vehicles that were captured many years before. The most common gun was the German 7.5cm PAK 40. (See Bellona Handbook No. 1, part II which lists in detail the variations found on fully tracked chassis).

Like all similar conversions of French vehicles the PAK 40 was fitted with a new large gun shield which allowed some traverse to both left and right, without complex anti-splash arrangements. The gun was mounted directly over the tracked section, and because of this, the superstructure varies considerably from that on the basic Schuetzenpanzer S 307 (f).

In all sixteen units of the tank destroyer were converted and issued to the troops.

(Photo 54: STT 6746).
(Photo 55: STT 7185).

54



VEHICLE	YEAR	OFFICIAL DESIGNATION	FUNCTION	CREW	FIREPOWER
250/1	1939/42	Leichter Mannschaftstransportwagen	Armoured Personnel Carrier	6	2 x MG 34, 1 x MP, 4 x Kar.
251/1	1942/45	Leichter Schuetzenpanzerwagen	Armoured Personnel Carrier	6	2 x MG 34/42, 1 x MPi, 4 x Kar.
250/2	1940/45	Leichter Fernsprechwagen	Telephone Communications	4	1 x MG 34, 1 x MPi, 4 x Kar.
250/3	1941/45	Leichter Funkpanzer	Radio Vehicle	4	1 x MG 34/45, 2 x MPi, 3 x Kar.
250/4	1941/42	Leichter Truppenluftschuetzpanzerwagen	Anti-aircraft–never produced		
250/4	1943/44	Leichter Beabachtungspanzerwagen	Armoured Observation Vehicle	4	1 x MG 42, 2 x MPi.
250/5	1941/43	Leichter Beobachtungpanzerwagen	Armoured Observation Vehicle	4	1 x MG 34, 1 x MPi. 6 Grenades.
250/5	1943/44	Leichter Aufklaerungspanzerwagen	Armoured Reconnaissance Vehicle	4	1 x MG 42, 2 x MPi, 6 Grenades.
250/6	1941/42	Leichter Munitionspanzerwagen	Ammunition Carrier	2	1 x MG 34, 1 x MPi.
250/6	1942/44	Leichter Munitionspanzerwagen–Ausf B	Ammunition Carrier	2	1 x MG 34/42, 1 x MPi.
250/7	1941/44	Mortar Carrier			
250/7	1941/44	Leichter Schuetzenpanzerwagen (Schwerer Granatwerfer)	Mortar Carrier	4/5	1 x 8cm GR.W.34, 1 x MG 34, 2 x MPi.
250/7	1941/44	Leichter Schuetzenpanzerwagen (Munitionsfahrzeug)	Mortar Ammunition Carrier	4	2 x MG 34/42, 2 x MPi.
250/8	1943/45	Leichter Schuetzenpanzerwagen mit 7.5cm KwK 37/K51	7.5cm Support Gun	3	1 x 7.5cm KwK 37 or K51. MG 34/42, 2 x MPi.
250/9	1943/44	Leichter Schuetzenpanzerwagen (2cm)	Semi-tracked Armoured Car	3	1 x 2cm KwK 38, 1 x MG 34, 1 x MP 38, 8 Grenades.
250/10	1940/42	Leichter Schuetzenpanzerwagen (3.7cm PAK).	3.7cm Anti-tank Gun/Platoon Leader	4	1 x 3.7cm PAK 35/36, 1 x MG 34, 2 x MP38.
250/11	1941/43	Leichter Schuetzenpanzerwagen (Schwere Panzerbuechse 41)	2.8cm Anti-tank Gun/Platoon Leader)	6	3 x Kar 98 K 1 x 2.8cm S,Pz.B41, 1 x MG34, 2 x MP38.
250/12	1940/44	Leichter Messtruppanzerwagen	Artillery Ranging Survey Vehicle	4	1 x MG 34, 1 x MP 38, 4 x Kar 98 K
252	1940/41	Leichter Gepanzerter Munitionstransportkraftwagen	Ammunition Carrier	2	2 x MP 38.
253	1940/41	Leichter Gepanzerter Beobachtungkraftwagen	Armoured Observation Vehicle	4	4 x MP 38.
4/1	1944/45	Munitionspanzer 'Maultier' (Opel)	Armoured Ammunition Carrier	3	1 x MG 42.
4/1	1944/45	15cm Panzerwerfer 42 Auf 'Maultier' (Opel)	Rocket Projector Vehicle	3	1 x 15cm Panzerwerfer 42, 1 x MG 42.
	1943/44	Leichter Schuetzenpanzerwagen U 304 (f)	Armoured Personnel Carrier	6	1 x MG 34/42, 2 x MP 38, 4 x Kar 98 K.
	1943/44	Leichter Krankenpanzerwagen U 304 (f)	Armoured Ambulance	2	
	1943/44	Mittlerer Schuetzenpanzerwagen S 307 (f)	Armoured Personnel Carrier	10	1 x MG 34/42, 2 x MP 38, 6 Kar 98 K.
	1944	Mittlerer Schuetzenpanzer wagen S 307 (f) mit Reihenwerfer	Multiple Mortar Carrier	4	16 x 8.1cm s. GR.W.(f) 1 x MG 34, 2 x MP38.
	1944	7.5cm PAK 40 L/46 Auf Mittlerer Schuetzenpanzerwagen S 307 (f)	7.5cm Tank Destroyer	3/4	1 x 7.5cm PAK 40, 1 x MG 34/42.

Glossary

NORMAL TERM (FULL TERM, IN BRACKETS*)	ENGLISH TRANSLATION
Ausf. (Ausfuerhung)	Model, Mark
Beobachtungs	Observation
bis	to
Drilling	Triple
Fernsprechbetreibs	Telephone exchange
Fernsprech	Telephone
Flammpanzerwagen	Flamethrower vehicle
Fla MG, (Fliegerabwehr MG)	Anti-aircraft Machine gun
FU, (Funk)	Radio
Funksprechgeraet	Radio telephone equipment
Geraetpanzerwagen	Armoured equipment carrier
Gepanzerter	Armoured
Granatewerfer	Mortar
Infrarotscheinwerfer	Infra red searchlight
I.G. (Infantrie geschuetz)	Infantry gun
Kommandopanzerwagen	Armoured Headquarters vehicle
Krankenpanzerwagen	Armoured Ambulance
Kar, (Karbine)	Rifle
KwK, (Kampfwagenkanone)	Tank cannon
MG, (Maschinegewehr)	Machine gun
MP, (Maschinepistole)	Submachine gun, Machinepistol
MTW, (Mannschafts-transportwagen)	Troop transport vehicle
Munition	Ammunition
oder	or, alternatively
Panzerwerfer	Armoured mortar
Reihenwerfer	row mortar
S.Pz.B, (Schwerer panzerbuche	Heavy anti-tank rifle
Sturmgeschuetzq	Assault gun vehicle
Truppenluftschutz-panzerwagen	air protection vehicle
Wurfkoerper	Pocket projectile
Wurfrahmen	Projectile racks
Zubehoer	Prime mover

*Where abbreviation is shown – Full term in brackets.

MILITARY VEHICLE PRINTS

Nos. 1 - 19 16 pages. 9 x 6½ in. **20p** each Nos. 20 - 28 20 pages. 9 x 6½ in.. **25p** each

1 Tank Mk 1 – 1916(UK); Medium Mk A 'Whippet' 1918 (UK); PzKpfw 1 B/Pz Jaeger 1 – 1934/41 (GE): Jagdpanzer 'Tiger' (P); 'Elefant' – 1943 (GE).

2 M. SPW Sd.K13 251/1 Semitrack APC 1938/42 (GE); Pz Kpfw 'Tiger' II (Porsche turret) 1944/45 (GE); SU 100 – Tank destroyer – 1945 (SU); CHI-HA Medium type 97 – 1937/42 (JA).

3 Matilda Mk IV – 1940/41 (UK); TE-KE Tankette type 97 – 1937/45 (JA); M 18 GMC 'Helicat' – 1943/45 (US); M 781 HMC 'Priest' – 1942(US).

4 Stu. Pz IV 'Brummbaer' – 1944 (GE); Jagdpanzer 38 (t) 'Hetzer' – 1944/45 (GE) T 34/85 – 1943/46 (SU);Klimenti Vorsihilov 1 and 11 1940/42 (SU).

5 M24 'General Chalfer' – 1944/50 (US); M4 'Sherman' 105mm Howitzer HVSS – 1944 (US); 10.5 cm –zFH 18 and Pz II (SF) 'Wespe' 1942/44 (GE); Volkswagen Personewagon, 2 versions 1940/45 (GE); Volkswagen Schwinnwagen 1942/44.

6 Cruiser tank 'Cromwell Mk IV' – 1943/45 (UK); Pz Kpfw IV J. – 1944/45 (GE); Sturmgeschuetze III – 1941(GE); Jeep with trailer and Jeep – 1942/45 (US).

7 Sherman VC (17-pdr) 'Firefly' 1944/45 (US/UK); M 41 155mm HMC 'Gorilla' – 1944/55 (US); Pz Kpfw III F – 1940/41 (GE); SU 85 Tank destroyer – 1944 (SU).

8 'Jagdpather' Sd Kfz 173 – 1944/45 (GE); Cruiser tank 'Comet Mk I' – 1944/46 (UK); T 26 Super navy tank (double coverage) 1945 (US).

9 M 10 3" GMC 'Wolverine' 1942/43 (US); 8.8 cm FLAK 18 and Zg Kw 8-ton Sd Kfz 7 1934/44 (Double coverage) (GE); T14 Assault tank 1943 (US).

10 Carro Amato Tipo M13/40" 1940/42 (IT); 7.62 cm PAK 36 (t) auf Pz Kpfw 38 (t) Kfz t39-1942 (CZ/GE); 15cm SFH 'Lorraine' – 1942/43 (FR/GR); A7V Sturmpanzerwagon.

11 Pz Kpfw IV D – 1939/40 (GE); Medium tank 76 – 1941 (US); Light tank M22 Locust 1943 (US); Armoured Command Vehicle H.P. and L.P. (AEC) – 1944/45 (UK).

12 S. Pz Spaehwagon (8 rad) Sd Kfz 232 (FU) 1939/42 (GE); M 3AI 'General Stuart' III and IV – 1942 (US); Australian cruiser Mk I 'Sentinal' – 1942 (A). Opel 3 ton Trucks (1937/49) (GE); Maulbiger 1941/43 (GE).

13 Pz Kpfw 'Tiger I' E (Double coverage) 1941/44 (GE); M 4A3E2 Sherman 'Jumbo' – 1944 (US); 17-pdr 'Challenger' Mk I – 1942/44 (UK).

14 Tank Mk IV – 1917/18 (UK); Canadian Cruiser 'Ram II' – 1942/43 (CA); 15 cm sFH and GW III/IV 'Hummel' – 1942/45 (GE); VK 3001 (P) – Porsche type 100 'Leopard' 1939/41 (GE).

15 M 3 'General Lee Mk I' – 1941/42 (US); Armoured Car Dailmer Mk I' 1941/44 (UK); T82 105 mm HMC – 1942/43 (US); Pz Spaehwg II 'Luche' Sd Kfz 123 1942/43 (GE).

16 Light Tank Mk I – 1929/30 (UK) Pz Kpfw 'Panther' G – 1944/45 (GE); Armoured Car 'AEC Mk I' – 1942/43 (UK); Infantry Tank Mk 1 – 1935/39 (UK).

17 Cruiser Mk I and Mk ICS (A9) – 1936/39 (UK); M 26 'General Pershing ' – 1943/46 (US); Light Tank M 2AI – 1938/41 (US); PZ Kpfw II F 1940/44 (GE).
17-pdr SPC 'Archer' 1943/45.

18 (UK) Pz Kpfw 'E 100' – 1941/45 (Double Coverage) (GE); Light Tank M 2A4 – 1939/42 (US).

19 'Churchill Mk I' – 1940/41 (UK);Vickers M8T 'Vijayanta' 1963 (UK); Heavy Tank M 6 – 1940/41 (US) Armoured Car 'AMD Penhard et Levassor 178' (FR).

20 The German PzKpfw III – Late models. Ausf L – 1941/42. Ausf M 1942/43. 7.5 cm Sturmpanzwe-III' Ausf N 1942/42. Ausf M 1942/43, the 7.5 cm tank A 13 – A 13 Mk I/Cruiser tank Mk III – (Reworked); A 13 Mk III and IICS/ Cruiser tank Mk IV and Mk IV/CS and A 13 Mk IVA/VACS/ Cruiser tank Mk IVA-Mk. IVACS,.

21 The German tank destroyer – 7.5 cm PAK 40/2, auf Sfl II 'Marder' 1942/43 early and late models based on the PzKpfw II chassis; British 'Tortoise', 1942/47; British light tank Mk IA – with drawings of the A4E6. A4E7, A4E8, A4E9, A4E10, 1930/35 American Howitzer Motor Carriage T 3 based upon the Combat car MI 1939.

22 American heavy 155 cm Gun Motor Carriage M 12 with the GMC T6 prototype and 155mm GMC M 12 production model; Cargo Carrier M30 and the T 14 prototype. 1941/44 (SU 122 – 1944/46 Soviet Assault Gun Motor Carriage ISU 122 – D1-9S and A 25 S version, 1944/45.

23 Special Bundeswehr main battle tank – Kampf-Panzer 'Leopard' issue drawings prototype II – (Group A) Production Kampfpanzer 'Standard' – Leopard, Recovery and Engineer Vehicles Bergepazner 'Standard and Pionierpazner 'Standard' J-1962/60.

24 The World War I French RENAULT FT 17 Fighting tank that shaped the future development of AFV, in service from 1918 to 1945. This most important tank is given detailed coverage. Drawings include the Berliet turret, the normal riveted octagonal turret, with machine gun and 37mm cannon, also includes version mounting the 75 mm cannon. Drawings and text Christian Henri Tavard. The well-known Italian Medium rank Amato M 11/39 – 1939/41, which was the forerunner of the M13 40.

25 The renowned Soviet T. 34 Medium tank of 1939 plus the Churchill Bridge layer the U.S. Armoured Car T.18E2 "Boarhound" provide a trio of famous AFVs with extensively detailed 1/76th scale drawings plus supplementary 1/48th views of the T.34 and Churchill.

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29 The French Char Somua S-35 was the medium tank of the three French Divisions Legere Mecanique (DLM) at the outbreak of the German attack on France in 1940, is extensively detailed, together with the German Stumgescheutz IV (L/48) and the Three Ton Special Tractor Ford 3 ton from the U.S., feature in this varied issue.

30 The development of the "New Sturmgescheuetz" and the "Panzerjaeger Vomag" which the Germans introduced in the very last months of the war, the Jagdpanzer IV Ausfuehrung F (Sd Kfz 162) and Panzer IV/70 (Sd Kfz 162/1) are fully detailed with technical specification, in this all German issue.

31 The British Valentine carrier and 25 pdr gun Mk.1 known as the "Bishop". The U.S. Christie tank model 1919 by the Front Motor Drive Co. of Hoboken and the British Number 27 Artillery Trainer trailer feature in this issue with full technical specification.

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36 Autoblindomitragliatrice Ansaldo (Lancia 1 ZM, 1917)
Semovente Da 105/25 Suscafo M 43 – 1943/44
Sturmgeschuetz M 43 Mit 75/34 (851) (i) – 1944/45
Sturmgeschuetz M 43 Mit 75/46 (852) (i) – 1944/45